Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology

Dirk Evers Michael Fuller Anne Runehov Knut-Willy Sæther *Editors*

Issues in Science and Theology: Do Emotions Shape the World?





Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology

Volume 3

Series editor

Michael Fuller, University of Edinburgh, Edinburgh, United Kingdom

More information about this series at http://www.springer.com/series/13495

Dirk Evers • Michael Fuller Anne Runehov • Knut-Willy Sæther Editors

Issues in Science and Theology: Do Emotions Shape the World?





Editors Dirk Evers Martin-Luther-University Halle-Wittenberg, Germany

Anne Runehov Trelleborg, Sweden Michael Fuller New College, University of Edinburgh Edinburgh, UK

Knut-Willy Sæther Volda University College and NLA University College Bergen, Norway

ISSN 2364-5717ISSN 2364-5725 (electronic)Issues in Science and Religion: Publications of the European Society for the Study ofScience and TheologyISBN 978-3-319-26767-8ISBN 978-3-319-26769-2(eBook)DOI 10.1007/978-3-319-26769-2

Library of Congress Control Number: 2016934695

© Springer International Publishing Switzerland 2016

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

This Springer imprint is published by Springer Nature The registered company is Springer International Publishing AG Switzerland

Foreword

From 30 April to 4 May 2014, ESSSAT, the European Society for the Study of Science and Theology, arranged the Fifteenth European Conference on Science and Theology (ECST XV) in Assisi, Italy, in collaboration with the Pontifical University Antonianum (Rome), Perugia University and the Pontifical Council of Culture. Over 100 participants from Europe and beyond were attracted by the conference, and ESSSAT members and other conference participants alike were inspired to present and discuss about 70 papers in the conference's paper sessions. ESSSAT's conferences thus continue to promote the study of the interactions of science and theology by creating opportunities for scholars from a wide diversity of backgrounds, geographically and linguistically, and from different disciplines and confessions to engage in conversation and debate. The theme of the conference was Do Emotions Shape the World?, and it was approached from a number of different perspectives, including neuroscience, psychology, philosophy, technology and theology. The plenary lectures of the conference covered a broad spectrum of disciplines and approaches and are printed in this volume in revised and edited versions. In addition, the editors chose a selection of short papers presented at the conference and thus composed this volume of Issues in Science and Religion (ISR).

As ESSSAT's President, it is my pleasure and duty to take the opportunity of the publication of this issue to thank organisers and sponsors of the conference. ESSSAT expresses its gratitude to the local organiser Lluis Oviedo (ESSSAT Vice-President for the conference) and his team from the *Pontifical University Antonianum* (Rome). Other members of the organising committee were Antje Jackelén (ESSSAT President), Lotta Knutsson Bråkenhielm (ESSSAT Secretary), Knut-Willy Sæther (Scientific Programme Officer) and the late Chris Wiltsher (ESSSAT Treasurer). Thanks go to the *Sacro Convento di Assisi*, which helped pay for the simultaneous translation of the public lecture. We express our deep gratitude to the *Udo Keller Foundation – Forum humanum*, Neversdorf (Germany), which again supported the ESSSAT prizes. Finally we thank the staff from Springer and especially Cristina dos Santos for their cooperation on this volume, now the ninth of the old and the second of the new series.

Wittenberg, Germany

Dirk Evers

Contents

1	Introduction Michael Fuller	1
Par	t I The Importance of Emotions, and of Emotional Well-Being	
2	Attachment, Emotion, and Religion Pehr Granqvist	9
3	Post Traumatic Stress, Moral Injury, and Soul Repair: Implications for Western Christian Theology Rita Nakashima Brock	27
4	Shaping Emotions That Shape the World Marjorie Hall Davis and Karl E. Peters	41
5	Smile and Lie? Why We Are Able to Distinguish False Smiles from Genuine Ones Maria - Magdalena Weker	59
6	The Orientation of Longing Christopher Southgate	73
7	Cognitive or Affective? A Philosophical Analysis of Modes of Understanding Compassion Anne Runehov	87
Par	t II Reflections on Emotions from the Sciences	
8	From Vicarious Actions to Moral Behavior Christian Keysers and Valeria Gazzola	99
9	The Trouble with Words: Concepts of Religion in the Cognitive Science of Religion and the Role of Emotions Indrek Peedu	119

10	The Emotional Brain Hypothesis: Emotional, Social, and Religious Vetting in the Evolution of Rational Decision Making and Scientific Modeling Margaret Boone Rappaport and Christopher Corbally	133
11	A World of Quality: Codes of Conduct, Phenomenology of Feeling and Morality in Scientific Research Angela Roothaan	143
Par	t III Reflections on Emotions from Theological Perspectives	
12	Towards a Biblical Theology of Emotions Cardinal Gianfranco Ravasi	159
13	Is the Ear More Spiritual Than the Eye? Theological Reflection on the Human Senses Ernst M. Conradie	177
14	A Look at Reason Through Love's Eyes: The Sense of Meaningfulness Within a Bodily Context Roland Karo	189
15	Self-Conscious Emotions, Religion and Theology Fraser Watts	201
16	The Scientific Approach to Emotions: Its Relevance for the Cognitive Study of Religion and for Theology Lluis Oviedo	211
17	Spiritual Knowledge as Embodied Appraisals: A Reading of Jonathan Edwards from an Emotion Theory Point of View Mikael Sörhuus	223
18	Imaginative Expression of Faith and Science: The Poetry of R. S. Thomas W. Richard Bowen	235
Par	t IV Philosophical Reflections	
19	Mr. Spock and the Gift of Prophecy: Emotion, Reason, and the Unity of the Human Person Alfred Kracher	251
20	Can Reason Be Emotional? Zbigniew Liana	273
21	Ethics, Emotions and Theology: A Humean Investigation Hans D. Muller	283
Ind	ex	299

Contributors

W. Richard Bowen i-NewtonWales, Swansea, Wales, UK

Rita Nakashima Brock Soul Repair Center, Brite Divinity School, Texas Christian University, Fort Worth, TX, USA

Ernst M. Conradie Department of Religion and Theology, University of the Western Cape, Cape Town, South Africa

Christopher Corbally Department of Astronomy, University of Arizona, Tucson, AZ, USA

Michael Fuller New College, University of Edinburgh, Edinburgh, UK

Valeria Gazzola Social Brain Lab, Netherlands Institute for Neuroscience, Amsterdam, The Netherlands

University of Amsterdam, Amsterdam, The Netherlands

Pehr Granqvist Department of Psychology, Stockholm University, Stockholm, Sweden

Marjorie Hall Davis United Church of Christ, Hartford, CT, USA

Roland Karo University of Tartu, Tartu, Estonia

Christian Keysers Social Brain Lab, Netherlands Institute for Neuroscience, Amsterdam, The Netherlands

University of Amsterdam, Amsterdam, The Netherlands

Alfred Kracher Apple Valley, MN, USA

Zbigniew Liana Pontifical University of John Paul II and Copernicus Center for Interdisciplinary Studies, Kraków, Poland

Hans D. Muller Department of Philosophy, American University of Beirut, Beirut, Lebanon

Lluis Oviedo Antonianum University, Rome, Italy

Indrek Peedu Faculty of Theology, University of Tartu, Tartu, Estonia

Karl E. Peters Department of Philosophy and Religion, Rollins College, Winter Park, FL, USA

Margaret Boone Rappaport Georgetown University, Washington, DC, USA

Cardinal Gianfranco Ravasi Cardinal-Deacon of San Giorgio, Velabro, Rome, Italy

Angela Roothaan Free University, Amsterdam, The Netherlands

Anne Runehov Trelleborg, Sweden

Mikael Sörhuus Department of Theology, Uppsala University, Uppsala, Sweden

Christopher Southgate Department of Theology, University of Exeter, Exeter, UK

Fraser Watts University of Cambridge, Cambridge, UK

Maria - Magdalena Weker University of Cardinal Stefan Wyszyński, Warsaw, Poland

Chapter 1 Introduction

Michael Fuller

It is, perhaps, as difficult to define 'emotion' as it is to offer succinct understandings of what we mean by 'science' and 'theology'. It is therefore an important strength of a symposium such as this that the papers brought together herein enable a multiperspective view to be taken, in which the juxtaposition of a rich variety of understandings can mutually shed light on one another.

Some structuring of the material in this book has been undertaken, in grouping papers together under four headings. The first section contains papers in which authors address issues around the importance of emotions, and emotional wellbeing, in living a healthy life.

Pehr Granqvist begins with the observation that there is no such thing as religion without emotion. In exploring the origins of emotion, he draws on the Attachment theory of John Bowlby and Mary Ainsworth, noting that the way in which humans form bonds throughout their lives is intertwined with the development of emotions of various kinds. He explores the ways in which belief in God can be related to attachment theory (with God being seen as 'an absolutely adequate attachment-figure'), and the psychological power of the idea of a God who loves each individual unconditionally, no matter what they have done. He cautions against seeing such an idea as in some way 'infantilising' religion, since our forming attachments to others (or to God) is a 'cradle to grave' aspect of our lives. Still less should this approach be taken to lead to any conclusion about the existence (or otherwise) of God. Nevertheless, Granqvist maintains, it is clear that emotions do shape the world, not least for the religious believer.

Rita Brock examines the research which has been carried out on Post-Traumatic Stress Disorder (PTSD) and moral injury in US army veterans (moral injury being the disruption of an individual's deeply-held values caused by their encountering

M. Fuller (🖂)

New College, University of Edinburgh, Edinburgh, UK e-mail: Michael.Fuller@ed.ac.uk

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_1

situations violating their sense of ethics, or of justice). Emotions faced by these veterans include anger, anxiety, grief, shame, guilt and contrition. Brock observes that Western Christianity developed in mediaeval times a soteriology that might be seen to sanctify suffering, not least suffering in war; and she urges that this is unhelpful in comparison with earlier theologies of atonement, which focussed more on repentance, reconciliation and rehabilitation. Formal systems of penance acted as a 'ritual quarantine system', benefitting both those who were explaining their transgressions and the community which supported them in their doing so. This, Brock urges, offers a more effective model within which to engage with the treatment of PTSD and moral injury than the emphasis on redemptive suffering found in mediaeval Christianity, and perpetuated in some forms of Western Christianity today.

Marjorie Hall Davis and Karl E. Peters also explore some therapeutic aspects of religion in its relation to emotions. They look at the reciprocal fashion in which the world we inhabit shapes our emotions, whilst those emotions in turn shape the world we inhabit: they describe some of the factors that are involved with the expression of empathy; and they explore Christian Keyser's work looking at manifestations of psychopathy (see also Keysers' own paper in this volume). Davis and Peters describe practices which can shape our emotions, such as meditation and prayer, which are found in both Western and Eastern religious traditions. They offer some examples drawn from the practice of Internal Family Therapy to illustrate the impact of individuals' emotional states on their lives. Their paper serves to illustrate the played by emotions in that interplay.

The remaining papers in this section focus on particular emotions, and illustrate admirably three contrasting approaches which may be taken to thinking about emotion: scientific, theological and philosophical.

Maria Weker looks at smiling, which may often be considered to be a spontaneous expression of emotion, and which appears to be something which all humans do regardless of their cultural context. It can indicate joy and happiness: it can aid social interactions; and it may have had a role to play in the development of spoken languages. Smiling has been analysed by researchers from Darwin onwards, and this has allowed distinctions to be made between genuine and false smiles. It has been observed that these use different muscles, controlled by different parts of our brains. What does our capacity to feign pleasure or enjoyment say about ourselves? And how is it that we are often able to distinguish automatically between false and genuine smiles? Is this a faculty we have evolved, or might it be said to be something which is in some sense God-given?

Chris Southgate takes a theological approach in his exploration of the emotion of longing. He traces expressions and analyses of longing in authors from Plato, through Biblical and patristic authors, to Dante, Darwin, Freud and writers in the present day. He notes that the idea of *divine* longing may be discerned in some of these writings. He contrasts longing, as it is found in both religious and secular authors, with desire, concluding that 'authentic human longing is oriented by being conformed to God's longing'.

Anne Runehov looks at different understandings of compassion, exploring two extreme views which see compassion as an irrational distraction on the one hand, or an important foundation of ethical behaviour on the other. She surveys philosophical approaches to compassion from classical to modern times, and raises the important question: does the expression of compassion towards a person uphold or undermine the dignity of that person?

These three papers serve as springboards into each of the three remaining sections of this book, which are devoted to the pursuit of scientific, theological and philosophical perspectives on emotions. The second section explores some recent work on emotions from a scientific point of view. Christian Keysers and Valeria Gazzola survey recent work using functional Magnetic Resonance Imaging to examine the operation of mirror neurons – those neurons which fire in response to an individual's seeing the actions or emotions of others. They note that 'A whole body of evidence now suggests that we ... vicariously activate brain regions involved in our own emotions while we witness the emotions of others'. This offers a fascinating new perspective on human empathy. Keysers and Gazzola note that mirror neuron activity is absent in psychopathic subjects, although it can be 'switched on' if the subject is explicitly told to think in an empathetic way: what is missing in such individuals would appear to be the automatic propensity, rather than the innate ability, to feel the emotions of others. They conclude by suggesting that religions, which tend to endorse moral codes promoting empathy (such as the 'golden rule'), give a competitive advantage to cultures which espouse them.

Indrek Peedu notes the significant ways in which the concepts and definitions used by the Cognitive Science of Religion (CSR) have shaped the formation and development of that discipline. He compares and contrasts classic CSR ideas, such as those which stress the importance of counterintuitive ideas, and of perceptions of agency, with another evolutionary approach to explaining religious behaviour: the 'costly signalling' theory of religion, which maintains that the commitment involved in engaging with religious practices is a way of signalling trustworthiness. Emotions, in the latter context, are seen to be 'reliable and honest' indicators, hence enhancing an individual's trustworthiness. Peedu concludes that CSR approaches, which are 'based on one specific combination of conceptual and empirical tools', are but one among many possibilities for understanding religious belief. They cannot claim any epistemological superiority over other approaches which use alternative tools.

The paper by Margaret Boone Rappaport and Christopher Corbally offers some interesting speculations regarding the involvement of emotion in rational decision-making in early hominins, proposing that 'human sentience is an evolved, complex adaptive capacity that is cognitive, but ... based on specific perceptual and emotional features, too'. They offer an imaginative reconstruction of such involvement in the form of a short drama, developed as part of a project investigating human sentience, and urge that rational decision-making must take account of the emotional, social and religious context in which it is undertaken.

Angela Roothaan returns us from speculations about human prehistory to the practicalities of the present day. She looks at the operation of 'codes of conduct' which guide ethical practice in scientific research communities, and about the ways in which these codes can be challenged by the practicalities of 'getting ahead' in research environments. She finds in the phenomenology of feeling developed by Max Scheler a possible means of transforming codes of conduct, so that they are no longer about abstract, 'external' principles with a disciplinary focus, but rather about a culture that enables researchers not only to behave ethically but to develop more inspirational, deep-seated and positive values, including spiritual values. Such transformed codes of conduct would also lead to a more emotionally coherent research environment than one which merely plays lip-service to a set of rules.

In the third section of the book authors look at emotions from a variety of theological viewpoints. Cardinal Gianfranco Ravasi sets out to develop a 'theology of emotions'. He notes the huge range of emotions (both negative and positive) which are to be found within the pages of the Bible, and which are attributed there both to God and to human beings: God is not some unfeeling, intellectual concept in the Bible, nor is an emotionless impassivity seen there as any kind of goal towards which humans should aim. Ravasi notes the ways in which contemporary divisions of experience, into rational, psychological, philosophical, ethical and other categories, are foreign to the biblical writers, who view experience in a more unitary way although they do make an important distinction between emotion and desire. He demonstrates the ways in which emotions in the Bible are distributed among a number of physical organs: the heart, intestines, kidneys, nose and liver. He then notes the ways in which emotions, such as anguish and tenderness, are expressed in biblical texts concerning Jesus, and concerning God. Emotions manifestly have a place in Christian theology, revealing as they do some important aspects of human beings - and even of God.

In contrast to the 'whole-body' approach to emotions set out in Ravasi's paper, Ernst Conradie notes that Protestant Christian theology has often given greater priority to cognitive than to emotive aspects of human personhood, focussing (as it were) on 'head' rather than 'heart'. Conradie detects a 'hierarchy of the senses' in this theology, with hearing being especially privileged over the other senses since justification comes to us 'in the form of an alien and unmerited word of forgiveness'. Stressing instead the importance of the senses of touch and of sight, as relating more obviously to the physical rather than the intellectual world which humans inhabit, Conradie offers some theological reflections on how each of these senses can be also be revelatory of some aspect of God – and how they can thus also bring together our intellectual and emotional 'worlds'.

Roland Karo continues this strand of thinking about humans as corporeal entities. He notes that mystical states in religious traditions are often associated with 'ego death', and that, paradoxically perhaps, this is commonly seen as a positive, ecstatic state rather than a negative one. Karo explores this concept with reference to both contemporary neurophysiological studies and the poems of St John of the Cross, unpacking these within an 'Apollonian *versus* Dionysian' hermeneutic. Karo concludes that ego death can be experienced from within different emotional gestalts, and that it is love which leads to positive appreciation of it.

Fraser Watts' valuable paper begins with some groundwork clarifying various different kinds of emotion. In particular, he explores the distinction between

Ekman's 'basic' emotions and more complex, self-conscious emotions, and he concludes that the latter are more characteristically human than the former. He goes on to explore the theological consequences of this, not least when it comes to emotions such as shame and guilt, and to interpreting traditional stories such as that of the Fall of Adam and Eve.

Lluis Oviedo offers an overview of the scientific study of emotions, in order to assess their theological significance. He observes that a broad sweep of scientific disciplines – biological, neurological and social – have engaged with the study of emotions; and, like Watts, he notes the distinctions that have been made between different types of emotion (between first- and second-order emotions, for example, and between positive and negative emotions). He draws particular attention to ways in which the study of emotions has been explored within the sphere of the cognitive science of religion. Oviedo urges that, since the emotions are important in accounts of religion, it is vital that theologians should reflect on the scientific study of emotions, in order to achieve an 'updated version of Christian faith' which take into account the outcomes of research in the cognitive and biological studies of religion.

There follow two papers which focus on two very different theological writers. Mikael Sorhuus engages with the thought of American theologian Jonathan Edwards, regarding his concept of 'the sense of the heart'. Drawing on the ideas of philosopher Jesse Prinz, who sees emotions as 'embodied appraisals', Sorhuus urges that Edward's 'sense of the heart' may be seen to be a means of bringing together cognitive, bodily and emotional processes, in such a way that none of them are excluded. Concluding this section, Richard Bowen explores the work of the great Welsh priest-poet R. S. Thomas. Bowen maintains that 'serious consideration of the relationship between faith and science has taken place almost exclusively in a form of scholarly scientific discourse. Consequently, the faith-science dialogue lacks expressive richness'. Bowen urges that poetry can be expressive of both reason and emotion. He explores the themes of faith, and of science and technology, found in Thomas' poems, and then focusses on one poem in particular in order to demonstrate that 'reflection on such a poem can give insights that are unattainable in conventional scholarly discourse'. Bowen suggests that Thomas offers a positive assessment of pure science, seeing no conflict between pure science and faith; however, Thomas voices suspicion of the de-humanising effects of technology. Bowen urges that poetry such as this seeks creatively to explore, rather than to explain, the Universe. Insofar as poetry has access to, and engages with, our emotions, it enables them to participate in this creative exploration.

In the final section of the book, authors offer some reflections and explorations of emotion from various philosophical perspectives. Alfred Kracher explores the Stoic roots of the way of thinking that sets emotions in opposition to rationality, using the character of Mr Spock in the TV series *Star Trek* as a modern exemplar of someone espousing such a philosophy. He notes that Western Christianity has sometimes endorsed this approach, by distrusting human emotions and by portraying God as above and beyond them; but he also observes that the Christian mystical tradition, notably the Ignatian tradition, contains within it resources that allow us to

move beyond such views of God, and of ourselves. Kracher concludes that emotions would not have evolved if there had not been some practical benefit to be had from them, and that (*pace* Mr Spock) emotions as well as rationality are part of a normal, healthy human life.

Zbigniew Liana likewise seeks to move beyond a crude reason-emotion dichotomy, by asking the question: 'Can reason be emotional?' He explores the meanings of the words 'reason' and 'emotion', both as they are commonly used and as they are used within the confines of philosophical discourse, and draws on the concept of a 'metascientific revolution' found in the writings of the philosopher Joseph Życiński to point out the contingency of the idea of something 'being scientific'. Liana concludes that reason not only can, but should, be emotional.

Finally, Hans Muller explores some of the ethical implications which arise from seeing emotion and reason, and science and religion, as dichotomies. He observes that contemporary scientistic standpoints have been seen to lead to moral nihilism, which might lead some to advocate a more emotion-centred approach to ethics. However, Muller draws attention to one precedent for such an emotion-centred approach: the Scottish Enlightenment philosopher David Hume. Hume 'forcefully advocated the supremacy of the passions over reason in the sphere of morality', and yet he also reached the surprising conclusion that it is not possible to attribute moral qualities to God, leading to a position of 'moral atheism'. Muller concludes that, whilst an approach to moral issues based on emotion rather than reason might appear more theologically congenial than one based on scientistic thinking, the case of Hume suggests that this is by no means a straightforward assumption.

This collection of essays offers the reader the fruits of contemporary scholarly reflection on emotions from a rich variety of academic fields, scientific, theological and philosophical. From their various perspectives, the writers here generally caution against too rigid a separation of reason and emotion, and stress the importance of our reflective engagement with emotions to our leading of healthy lives. Acknowledging the ways in which emotions shape our lives, and shape thereby the worlds in which we inhabit, they encourage us in various ways to reflect on that process of shaping, and to deepen thereby our understandings of our emotions, our world – and ourselves.

Michael Fuller is a Teaching Fellow at New College, in the University of Edinburgh, where he works in the field of science and religion. He is an Anglican Priest, who has served in Churches in the dioceses of Oxford and Edinburgh, and run the ministerial training programmes for the Scottish Episcopal Church. He has written and edited numerous books and papers in the field of Science and Theology, and also has an interest in the interfaces between theology and literature, and theology and music. He is the Chair of the UK's Science and Religion Forum, and is Vice-President for Publications for ESSSAT.

Part I The Importance of Emotions, and of Emotional Well-Being

Chapter 2 Attachment, Emotion, and Religion

Pehr Granqvist

Abstract This paper highlights how the development of emotion is intertwined with the development of attachment. I argue, also, that there are certain central emotions and affects associated with particular forms of attachment, which come to define the self in relation to others. Further, this emotion-attachment configuration is expressed in religion, especially in the religious individual's perceived relationship with God. I describe pertinent findings from the scientific literature on the attachment-religion connection indicating that experientially based internal working models of self and other are generalized and lawfully expressed in the context of religion. Thus, attachment-related interactions will affectively color the individual's perceived relationship with God. Yet, God and religion may also provide a source of surrogate attachments, which may aid in repairing negative working models of self and others. Finally, words of caution are offered to prevent misunderstandings of the implications arising from a consideration of how the emotion-attachment configuration is expressed in the context of religion.

Keywords Attachment • Internal working models • Compensation • Emotion • Affect • Religion • God • Theology • Evolution • Cognition

There should be no doubt that emotions contribute to shaping the world and the way that we perceive it. Nor is there any doubt that religion is an important feature of the world. And there is no such thing as religion without emotion. Similarly, there is no such thing as attachment without emotion, and yet emotion is also importantly shaped by attachment-related processes and experiences. In this paper, I argue that the inextricable links observed between attachment and emotion come to shape religion in important ways, and particularly in how people mentally experience and represent God in relation to themselves.

In the first section of this paper, the core features and concepts of attachment theory and research are outlined. In the second section, I illustrate how the development of emotion is intertwined with the development of attachment, and vice versa.

P. Granqvist (🖂)

Department of Psychology, Stockholm University, Stockholm, Sweden e-mail: pehr.granqvist@psychology.su.se

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_2

The third section contains an overview of how matters of religion are linked to the attachment-emotion configuration. Finally, I give some words of caution to help prevent misunderstandings that might stem from a consideration of how the attachment-emotion configuration contributes to shaping religion.

Notably, attachment theory was applied as a conceptual framework in the psychology of religion some 25 years ago (see, e.g., Kirkpatrick 2005). Emotion has been pivotal, at least implicitly, to the application of attachment theory to religion from the outset, but the central role of emotion has typically not been made explicit. This chapter serves in part to fill that gap.

Overview of Attachment Theory and Research

John Bowlby (1969/1982, 1973) and Mary Ainsworth (1985) – the founding figures of attachment theory – defined attachment relationships as strong and enduring affectional bonds characterized by the attached person (usually the offspring) selectively maintaining proximity to his/her caregiver, using the caregiver as a safe haven during distress, and as a secure base when exploring the environment. Finally, in using the caregiver – or attachment figure – in these ways, the attachment figure is implicitly perceived as stronger and wiser by the attached person.

Although physical proximity is an important component of attachment early on, later in development immediate physical proximity normally becomes less of an issue. Partly because of this, a psychological sense of 'felt security' has been suggested as a more viable aspect in older individuals (Sroufe and Waters 1977).

According to Bowlby (1969/1982), the attachment behavioral system was naturally selected over the course of evolution because it enabled gene survival in our evolutionary environment(s) by protecting offspring from natural dangers. Consequently, the attachment system is activated by natural clues to danger (e.g., separation from the attachment figure, physical illness, physical pain) and terminated by clues to safety (most notably physical contact with the attachment figure).

Bowlby (1969/1982, 1973) also argued that early interactions with the attachment figure lay the foundation for what he termed 'internal working models' (IWMs) of Self and Others in relationships. IWMs function as a form of affectivecognitive filter, based on early experience, that guides our perception, expectations, and behavioral inclinations in future relationships. It should be noted that internal working models are both affective and cognitive, as are many other things in psychology; the boundaries between the two are indeed quite fuzzy, especially in the context of emotional relationships.

Finally, Bowlby (1973, 1980) argued that the attachment system is active from cradle to grave, for example, in long-term adult pair-bonds, which are typically the principal attachment relationships in adulthood. This implies that manifestations of attachment in adulthood are not 'regressive', or a sign of 'dependency'.

In certain situations, however, the individual may turn elsewhere (i.e., to a surrogate) for attachment than to his/her usual attachment figures:

Whenever the 'natural' object of attachment behaviour is unavailable, the behaviour can become directed towards some substitute object. Even though it is inanimate, such an object frequently appears capable of filling the role of an important, though subsidiary, attachment 'figure'. Like the principal attachment figure, the inanimate substitute is sought especially when a child is tired, ill, or distressed (Bowlby 1969/1982: 313).

Besides Bowlby's basic theory, attachment research often focuses on individual differences in attachment. At the core of secure attachment (B, ca 60–70 % in normal samples) is the assumption of a positive and coherent set of IWMs; the self is assessed as worthy of care, and others are assessed as reliable providers of care. This is manifested in a behavioral balance between attachment and exploration in infant-toddlers (Ainsworth et al. 1978) and in linguistic coherence in discussions of attachment-related memories in adults (Main et al. 2003). In other words, these people do not just claim that their caregivers are loving and caring but they also behave as though that is the case, and they seem to have reason to do so, given that sensitive and other aspects of positive caregiving are the most important predictors of secure attachment (e.g. De Wolff and van Ijzendoorn 1997). Bowlby (1973) and later Main (1991) argued that this strategy is to be understood as primary; virtually all children give it a shot, and it is only when it repeatedly fails that the child will seek out another one (i.e., a secondary or conditional strategy).

Insecure attachment (ca 30–40 % in normal samples) is often subdivided to three categories: avoidant/dismissing (A), ambivalent/preoccupied (C), and disorganized/ unresolved (D) attachment. They share a negative and incoherent set of working models at the core (see Cassidy and Shaver 2008).

The first two of these are viewed as conditional strategies. When the primary strategy fails, the child will defensively shift his/her attention from attachment or from exploration and will also defensively exclude attachment- or exploration-related information. This can be done in two different ways (Main 1991), by minimizing (i.e., avoidant attachment) or by maximizing (i.e., ambivalent attachment) attention to attachment.

Notably, these conditional strategies (or organized forms of insecurity) can be understood as defensive filters operating as part of the child's IWMs. Main (1991) noted that the conditional strategies never fully override the primary/secure one. In computer terms, the conditional strategies represent a form of re-calibration or adjustment of the program rather than a different program. Also, the conditional strategies are fragile; they may work sufficiently well in many situations, but they are prone to crumble during intense stress. Intense stress, then, may help to re-pull the primary or secure strategy that is still lurking as a promise behind the defensive filter.

There is some controversy as to how disorganized attachment should be understood, whether as a defensive response (cf. psychoanalytic ideas related to trauma and dissociation) or as 'just' a break-down in organization (e.g. Liotti 2006). In either event, it is characterized by lapses in behavioral or linguistic organization related to attachment (e.g. approach-avoidance conflicts, freezing).

Although the attachment system is active from cradle to grave, attachment is a principal developmental task of the early years; after that, other tasks and challenges rise to the fore. Nevertheless, attachment relationships continue to serve as foundations from which the child explores its surroundings and navigates in relation to other developmental tasks and challenges (e.g. peer relations, coping, sense of competence: Sroufe 1979).

A large body of developmental and clinical research, on child and adult populations alike, has now indicated that secure attachment acts as a protective factor in development, which generally facilitates the individual's adjustment, even in the presence of other stressors or vulnerability factors such as poverty or a 'difficult' temperament (e.g. Sroufe et al. 2005). In contrast, disorganized attachment has emerged as a general risk factor in development, which is linked to behavioral problems, less favorable peer relations and social skills, and is overrepresented in most clinical populations (Bakermans-Kranenburg and van IJzendoorn 2009; van IJzendoorn et al. 1999).

Attachment and Emotion

The development of attachment is intertwined with the development of emotion. Before turning to the inextricable links between these two constructs, it may be useful to consider how emotion and related terms are conceived in psychology.

What Is Emotion?

There are, not surprisingly, many ways to define and understand emotion. One of the most influential is Scherer's (2005) component process model of emotion. According to this model, emotions are characterized by five main components, processed in a stage-like fashion: appraisal, bodily symptoms, action tendencies (motivation), expression (communication), and feelings (subjective experience). For example, a snake phobic sensing the presence of a snake assesses the snake as a source of acute danger and reacts with strong amygdaloid activation and sympathetic arousal (e.g. heart pounding), escape movements, a fearful facial expression, and a subjective sense of fright.

The first component (i.e. 'appraisal') is probably the most controversial, indeed the source of a long-standing debate in psychology, as it implies that some form of cognitive process is required for emotion. But whether appraisal is to be understood as cognitive or not, some brain processing of the stimulus (e.g., snake) is of course required for an emotion to be elicited. And brain processing is never purely cognitive but almost always involves affective components. Indeed, 'cognition' is a psychological construct, not a neural construct, and its boundaries are fuzzy indeed.

Ekman (1992) has taken discrete emotions as a principal area of interest. His theory about basic emotions is arguably the most important in the field of emotion over the last four decades. Ekman's notion of basic emotions refers to evolved adaptations in the form of momentary (often very rapid) states that are discrete, measurable, physiologically distinct, universal, and developing early in life, typically during the first year. According to Ekman, there are six such basic emotions: happiness (known by some other scholars as love, joy, or trust), anger, fear, sadness, surprise, and disgust.

In the wake of the child's developing, explicit sense of self (Lewis and Brooks-Gunn 1979), other and more complex emotional states start to appear, often in the second year of life. Such self-conscious emotions (e.g. pride, guilt, and shame) involve perceived strengths or inadequacies of the self and often reflect blends of basic emotions, which are highly culturally influenced.

If taken to imply that all components of emotion in Scherer's (2005) model, or features of emotion in Ekman's (1992) model, must be present (i.e., necessary conditions) for an emotion to be present, then these models portray emotion in an ideal type (or prototype) form; emotion as an integrated, organized unit. Very clearly, some emotional things are characterized by conflicting attributes, as will be illustrated later. This is especially likely to be the case for older individuals, who have learned to partially regulate emotions: for example, to suppress certain experiential components (e.g. of envy) and to miscommunicate emotional states to others (e.g. stonewalling or hidden rage in a conflict-ridden marriage, characterized by intense physiological arousal and yet behavioral inhibition of much of its expression). Therefore, it is often more fruitful to focus on affect rather than discrete emotion, with the former understood as a more general term that includes less differentiated and more fuzzy states of arousal and experience (e.g. distress).

Also, when the explicit recognition of self along with self-conscious emotions have emerged, it is easy to see how the basic emotions may also come to be affected. For example, a person in an angry state may have come to understand that anger should not be expressed too overtly, and yet it is difficult not to as emotions involve action tendencies, so the person may experience shame at the self's inability to suppress expressions of anger. Anger, whenever it occurs, will be coupled with shame.

The Development of Attachment and Emotions Are Intertwined

How, then, is attachment tied to emotion, and to affect more generally? There are at least two inter-related points of entry into this question. The first is more normative (or species-typical) and relates to inextricable links in the development of attachment and emotions, whilst the second concerns individual differences in attachment and their relations to emotion and affect.

During the first 6 months of life, attachment has not really matured, that is, the infant has not yet settled on the figures to whom attachment behaviors will be preferentially directed, but is open to interaction with almost anyone that happens to be around. Not coincidentally, the attachment system itself is still under maturation (Bowlby 1969/1982). Considering emotions, the basic emotions have not yet matured either. The emotional states of the first months of life are very general and undifferentiated, consisting of little more than two global states: attraction to pleasant stimulation and withdrawal from unpleasant stimulation (Camras et al. 2003). Withdrawal from unpleasant stimulation goes in tandem with displays of general distress, typically evident in crying; a form of attachment behavior that serves to increase the probability of physical proximity between infant and caregiver. More specifically, crying serves the all-purpose function of alerting the surrounding (and especially the caregivers) to the infant's need, whatever it may be at the time. On the other hand, newborns' and young infants' attraction to pleasant stimulation is evident in positive interest (preferential looking and smiling).

Yet, these general affective states are highly socially directed; both are often elicited and terminated by social stimulation or the lack thereof (e.g., social understimulation evokes distress, tender loving care evokes positive emotionality; Bowlby 1969/1982). And the social stimulation is of course usually offered by the child's caregivers, that is, by attachment figures in the making.

During the second half of the first year, the child has typically formed one or a few attachment relationships (*ibid*.). During the very same period, the child's highly general emotional states differentiate into basic emotions. Distress branches into 'negative' basic emotions (most notably anger and fear), and positive emotionality crystallizes into happiness (or joy, love, trust). The prototypical fear of a child at this age is the fear of strangers, and the prototypical happiness is the love felt for an attachment figure who responds sensitively to the infant's needs.

At this critical point of development, an infant who is fortunate enough to be cared for by a sensitive and responsive caregiver will, then, presumably experience happiness (love, trust, joy) often and will find that negative emotions can be managed through the help of the caregiver; negative emotions need not be defensively distorted but can be directly communicated (Cassidy 1994). Happiness and resolution will become associated with the attachment relationship in the child's mind.

A less fortunate infant, who is cared for by an unresponsive, insensitive caregiver, will not experience happiness as often, at least not in relation to interactions with the attachment figure. Similarly, this infant will not have equally reliable experiences of the attachment figure's aid in bringing negative emotional states to resolution; perhaps the child cries in vain half of the time or gets punished or ridiculed for crying. So the child must learn, eventually, to adapt his/her emotional expressions to the desiderata of the caregiver. Defensive distortion of emotion and affect will become associated with the attachment relationship (Cassidy 1994).

Towards or during the second year of life, self-conscious emotions will also come to be interwoven with attachment. At this point, the child's physical mobility and exploratory inclinations are also on the increase, so the task of the attachment figure becomes more complex; not only is it important to be accessible as a safe haven when the child is distressed, but also to be available as a secure base when the child treads new exploratory territory, as well as to communicate limits and engage in discipline in ways that show respect and care for the child's self. Not coincidentally, this is the age period during which the child will come to assess the self as worthy of care, as competent, and a source of pride versus the self as unworthy, incapable, and a source of shame and guilt.

Central Affect and Individual Differences in Attachment

The second point of entry to the attachment-emotion connection concerns individual differences in attachment and their effects on emotional/affective states and dispositions, especially as they are experienced and expressed in relationships. I have already set the stage for this in the remarks made at the end of the previous section. The central point is that individual differences in attachment can be characterized in terms of emotional experiences and expressions in the child-caregiver dyad. There are certain central emotions and affects associated with particular forms of attachment, states that come to define the self in relation to others.

With 'central' emotion/affect, I do not mean to imply that the emotion/affect in question is necessarily the modal one, the one experienced most frequently. In some cases, it may be central simply because it has been experienced at very intense levels, even if experienced rarely or only on occasion. Often, the source of the emotions/affects and the ways in which they are resolved are likely to be more important than their sheer frequency of occurrence.

Viewed from the angle of emotion, secure attachment can be characterized in terms of happiness (love, trust) and pride as central emotions. Furthermore, emotion (including 'negative' emotions such as anger and fear) is communicated in an open, and ultimately flexible, manner vis-à-vis the sensitive caregiver. In other words, the emotions may be relatively likely to come in the form of the organized units portrayed by emotion theorists such as Scherer (e.g. 2005) and Ekman (e.g. 1992). Also, the securely attached individual will develop a sense of reassurance that negative emotions can be resolved; they need not be feared, warded off, closed down, and so on, but can be communicated to others, who will aid the self if necessary. As Cassidy (1994) has noted, such interaction sequences will aid the child in developing emotion regulation skills. Such open communication of emotion may also lead observers to conclude that the emotional appearances are often real; what the child communicates is usually what the child feels, and the child is often - though of course by no means always - happy. The secure child may also on occasion experience high levels of anger, which is then also likely to be communicated openly. Thus, a parent who is occasionally yelled at and called derogatory names by his or her frantic 2-year old should entertain the possibility that these offenses reflect a perverted expression of security and love.

The most consistent caregiving predictors of child avoidant attachment are rejection and intrusion (Ainsworth et al. 1978; Isabella and Belsky 1991). Bowlby (1973) speculated that rejection initially gives rise to protest, expressed as anger. However, it is risky to express anger and neediness to a rejecting caregiver, whose patience for such behaviors seems very limited; indeed, the child could conceivably be ridiculed, abused, and ultimately abandoned if that behavior were to continue (Main 1981). Thus, anger will ultimately become hidden from the attachment figure and might be displaced against others (Bowlby 1973; e.g. aggressive behaviors towards toys and later against peers and out-groups). Being rejected and ridiculed for one's neediness is also linked to shame (Claesson and Sohlberg 2002; Leary et al. 2001). On the whole, avoidant child-parent dyads communicate emotion in distorted and rigid ways, for example using false smiles and lip-serving, socially facile expressions. In other words, the positive emotional appearances are unlikely to be real.

Ambivalent attachment is predicted most consistently from inconsistent sensitivity and involving or role reversing caregiving, in which the parent pulls the child's attention to the needs of the parent (Ainsworth et al. 1978; Cassidy and Berlin 1994; Isabella and Belsky 1991). Ambivalence is expressed as intense anger against the attachment figure, coupled with signals of helplessness (i.e. the self is incapable). Guilt for failure to please the parent is often present later in development (Main et al. 2003). One can observe distorted and rigid communication of emotion here as well, most typically angry resistance as though the child does not want the parent to attend to the child, coupled with feigned helplessness when the child does not get the parent's attention and care. On the whole, an observer is likely to conclude that there are overly negative and dramatic emotional appearances.

Disorganized attachment is most consistently predicted by atypical caregiving such as maltreatment, frightened and frightening caregiving (Hesse and Main 2006). Such parental behavior is believed to put the child in a paradoxical situation; on the one hand, the caregiver is the child's source of safety but on the other the caregiver is the source of alarm – hence the break-down in attachment organization. Psychologically, this implies a fear without solution, associated with dissociated affective states and communication vis-à-vis the caregiver is experienced both as persecutor and rescuer. An observer is likely to be alarmed and yet confused by the emotional appearances.

Attachment, Emotion, and Religion

The most important general points of departure for the attachment-religion connection are some observations made by religious scholars and researchers long before attachment theory was invented (see Kirkpatrick 2005). For example, religion can be understood as a relationship, among other things; indeed the word religion (relegare) literally means 'being bound', and one's personal relationship with God is often singled out as the most important aspect of one's religion. Also, love seems to be the very most central emotion involved in one's relationship with God – it certainly is not the only one, though, but more on that later. In fact, Kirkpatrick (2005) has suggested that the believer's perceived relationship with God meets the criteria for defining attachment relationships sufficiently well to be characterized as a form of attachment, at least as far as the psychological functions of the relationship are concerned (see also Granqvist and Kirkpatrick 2013; Granqvist and Kirkpatrick in press). First, regarding proximity maintenance, although there are many kinds of prayers, one of the most frequently endorsed reasons for praying is to experience a sense of closeness to God (known as contemplative or meditative prayer in the literature; Spilka et al. 2003). The importance of proximity maintenance is also highlighted by what it means to be separated from God; in much Christian theology, this is the very essence of hell.

Second, concerning God as a safe haven, people are particularly likely to turn to God during stress, and the more stressful a situation is, the more likely people are to do so (Pargament 1997). Empirical data also suggests that many sudden religious conversions occur during life situations of significant emotional turmoil (Ullman 1982).

Third, with respect to the secure base component, when believers are asked to rate God's traits, some of the most frequently endorsed are: loving, supportive, guiding, protective (Kirkpatrick 2005). These are qualities that are important for any secure base to possess in order to promote well-being and exploration in the attached person. Also, perceptions of having a personal relationship with a God that is thought to have such qualities predict aspects of well-being such as freedom from worry and remission from depression over and above almost every conceivable covariate (see Granqvist and Kirkpatrick in press; Smith et al. 2003).

Finally, that believers perceive God as stronger and wiser really goes without saying. In fact, at least in Christian theology, God is typically even perceived as omnipotent, omnipresent and omniscient, thus outperforming every other attachment figure conceivable.

Considerations such as these were important for the idea that the believer-God relationship can be defined as an attachment relationship. However, it is one thing to find affirmative evidence for an idea *post hoc*, and quite another to successfully predict religious outcomes *a priori*. Naturally, the latter has been needed as well. To give but one example of how this has been accomplished, from childhood (i.e. when attachment and religious representations are in the making), we told our participating 5–7 year old children stories about fictional, visually represented children who were in attachment activating and attachment neutral situations (Granqvist et al. 2007a). In the attachment neutral stories, the fictional child was in a bad mood, good mood, or neutral mood. We also asked the participating children to select a symbol in felt cloth that could represent God (in the form of a cloud, a heart, or a grown-up).

After each story, participating children were told to place their God symbol on any location on a felt board, which also contained the fictional child. The dependent variable was the physical distance between the fictional child and the God symbol. As predicted, the God symbol was placed significantly closer to the fictional child when he/she was in the attachment activating than in the attachment neutral situations.

These results have now replicated across four cross-national (U.S., Swedish and Italian) samples (see Granqvist and Kirkpatrick in press). These studies illustrate that God is already viewed as a potential safe haven in distress in the late preschool and early school years.

The religion-as-attachment idea has been supported by novel research in several studies covering childhood, adolescence, young adulthood, and old age. Moreover, it has been supported in at least two of the world's main faith traditions, Christianity and Judaism (for a recent review, see Granqvist and Kirkpatrick in press). Therefore, I concur with the American theologian Kaufman, who precognized the conclusion that can be drawn from this research: 'The idea of God is the idea of an absolutely adequate attachment-figure. ... God is thought of as a protective and caring parent who is always reliable and always available to its children when they are in need' (Kaufman 1981: 67).

Attachment Quality and Developmental Pathways to Religion

Also, individual differences in the attachment-emotion configuration are relevant to understanding individual differences in ways of feeling and relating to God and religion. We have argued that there are two attachment-related pathways to religion and to different ways of being religious (for a review, see Granqvist and Kirkpatrick in press).

The Correspondence Pathway. First, we claim that religion in the case of secure attachment and experiences of being sensitively cared for develops from (a) generalized, positive representations of self and other (IWM aspect), and (b) partial adoption of a sensitive caregiver's religion (social aspect). Hence, insofar as the caregivers have been actively religious, the secure offspring is expected to become likewise, in which case his or her beliefs in and perceptions of the divine will mirror that of a sensitive attachment figure. The IWM aspect is more central to emotion/affect than the social aspect so I will stick to the former in the remainder of this paper.

The hypothesis of IWM correspondence has received considerable empirical support. For example, secure attachment and estimates of sensitive caregiving experiences have been linked to a loving and caring God image (Cassibba et al. 2008; Kirkpatrick 1998; Kirkpatrick and Shaver 1992), and to increased religiousness, specifically in the context of a positive influence from other relationships (Granqvist and Hagekull 1999, 2003). Putting it more poetically: love seems to foster love for these people.

In addition, we have found in a number of studies that security and experiences of being sensitively cared for are associated with access to one's relationship with God also at unconscious/implicit levels of the mind. For example, in the child study described above (Granqvist et al. 2007a) in which we used semi-projective situations to study children's sense of closeness to God, we found a significant two-way

interaction regarding children's sense of God's closeness between secure *vs* insecure attachment on the one hand, and attachment activating *vs* neutral situations on the other. In this study, secure children placed the God symbol closer in attachment activating situations, but farther away in attachment neutral situations, than did insecure children. Another way to describe this interaction is that secure children discriminated to a larger extent between the two types of situations in their sense of God's closeness than did insecure children. In parallel to how secure children behave with their caregivers, they gave attention to closeness to God when attachment concerns were raised, and attended less to closeness to God when such concerns were not raised. These findings have recently been extended in a cross-generational study, in which secure attachment among Italian mothers predicted their children sensing God as closer compared to children of insecure mothers (Cassibba et al. 2013).

I'd like to highlight another of Cassibba's studies (Cassibba et al. 2008), because it seems immediately relevant not only to the task at hand but also to the Franciscan setting surrounding the 2014 ESSSAT conference, as some of the participants in this study were from Franciscan monastaries. Considered as a group, Catholic priests, monks and nuns may represent a prototype of rare believers who actually are likely to experience a principal attachment to God. The chastity vow entails abstaining from 'earthly' marriage and thus from what is the principal attachment relationship for most adults (Bowlby 1980). The daily lives are also to be 'lived in Christ'. Moreover, the day at the convent contains considerable time spent in contemplation about God, including several daily prayer events and a nightly religious service.

Psychologists are often both biased against and ignorant about religion, so for a psychologist it may be tempting to ask why on earth people would voluntarily seek out such a demanding religious life. Could it be as a form of compensation for attachment adversities in the past? In Cassibba's study, that did not seem to be the case at all. According to the method-of-choice for assessing adult attachment organization (the Adult Attachment Interview: Main et al. 2003), most of these participants (77 %) were secure, compared with lower percentages (roughly 60 %) in both a matched comparison lay-catholic group that was used in this study and an international meta-analytic normal population sample. Moreover, the mothers in the devout group were also estimated as high/higher than mothers in the comparison group in sensitivity by independent interview coders.

Notably, the idea of generalizing IWMs is relevant also to insecure attachment and experiences from insensitive caregiving. We have learned less from extant research about the generalization of negative IWMs in the context of religion, but the limited theoretical and empirical evidence available suggests that the self of the insecure individual is represented as unworthy (shameful, guilty) or self-sufficient (i.e. does not need God), and God is at least implicitly represented as distant or controlling (Granqvist and Kirkpatrick in press).

Anger in any of its many distorted forms is conceivably a central affect, though the anger may be displaced (e.g. against outgroups such as members of other faith traditions) while God may be idealized (cf. incoherent representation); God may be professed as loving and caring, but the mind of the insecure individual will often behave in opposite ways at unconscious/implicit levels of operation (e.g. shift attention from God during attachment activation: see Granqvist and Kirkpatrick in press).

Regarding disorganized attachment, fear and dissociated forms of fear is conjectured to be the central affect. The individual is prone to altered states when faced with stress, and there is potential 'saving' through mystical experiences, in which God may be represented as both persecutor *and* rescuer (cf. Otto's (1923) description of mystical experience as both 'fascination' and 'tremendum'). Supporting these speculations, we recently found empirical support for a mediating model linking unresolved states regarding loss and abuse (the adult analogue to disorganized attachment) to mystical experiences, via a general disposition for alterations in consciousness (or 'absorption', a mild form of dissociation) (Granqvist et al. 2012: for a successful conceptual replication, see Thomson and Jaque 2014).

I realize that the mediational model suggested may seem to pathologize mystical experiences, but appearances are not always real. In fact, we have argued that mystical experiences – which are not generally linked to psychopathology in the first place – may represent positive life-changing experiences following stress, and that such experiences might even promote mental reaggregation (Granqvist et al. 2012). As noted by the singer-songwriter Leonard Cohen (1993), 'there is a crack, a crack, in everything, that's how the light gets in'.

The Compensation Pathway. As noted at the outset of this chapter, Bowlby (1969/1982) speculated that certain conditions may lead people to seek out surrogate attachment figures. Insecure attachment in the primary attachment relationships may be one of these. Accordingly, with the so-called compensation hypothesis, we (Granqvist and Kirkpatrick in press) have stated that religiosity in the case of insecure attachment develops from distress regulation strategies, where God functions as a surrogate attachment figure for the individual. For this to take place, though, the individual's usual conditional attachment strategy may have to crumble (i.e. it no longer suffices for the avoidant individual to minimize attention to attachment and distress or for the preoccupied individual to remain preoccupied with his/ her usual attachment figures). This typically happens when stress becomes too high; that's when the crack appears, and that's when the light gets in.

To illustrate with a concrete, made-up example, consider an avoidant man who has focused too much on work and has relied too much on the bottle to regulate stress. His wife has finally had it, for real this time, and she leaves him. He drinks even more, and starts misbehaving at work. He's ultimately fired. In emotional desperation, he goes to an Alcoholics Anonymous meeting or to Church. When most vulnerable, he becomes continuously exposed to the idea that God loves him in spite of his shortcomings, indeed that God's love, unlike the love of fallible humans, is unconditional and eternal. Here, he 'finds' God, and it's a sudden, intense infatuation. Put differently, it's an attempt to make love into the central emotion.

The compensation idea has now received empirical support in relations between insecure attachment and estimates of parental insensitivity on the one hand, and a number of religious 'outcomes' on the other. The latter include religious instability (e.g. meta-analysis of sudden religious conversions: see Granqvist and Kirkpatrick 2004), increased religiousness during stress (intense relationship problems and crises, Granqvist and Hagekull 1999, 2003), and religious syncretism (Granqvist et al. 2014).

In adult studies, however, estimates of past attachment experiences have tended to predict religiousness more strongly than current attachment security-insecurity. For example, in a Swedish study, estimates of past parental insensitivity predicted religion in line with the compensation hypothesis, whereas current insecurity was unrelated to religiousness (Granqvist et al. 2007b). Thus people who have suffered past attachment adversities are more likely to experience sudden religious changes and conversions during periods of emotional turmoil, and yet having experienced such religious changes is not linked to an insecure/incoherent organization of attachment at present. Accordingly, it may be speculated that religion helps some individuals to 'earn' attachment security, that is, to develop a secure organization of attachment in spite of past adversities and insecurity (cf. reparative experiences with a therapist or a secure love partner: Main et al. 2003).

The idea of earned security through religion has a clear counterpart in how some previous scholars have considered the effects of religion on mental functioning (e.g. James 1902). This makes sense also if one considers the theological portrayal of God in religious scriptures and services to which believers, such as the avoidant man described above, are frequently exposed. Being exposed to the idea of God's unconditional love should be a very emotionally powerful message and experience, especially for people who have implicitly viewed themselves as unworthy of tender loving care and yet are in desperate need for it. How long this 'new morning' will last seems to vary however (Hood et al. 2009), so it will be important to determine in research which factors may contribute to earned security and which factors make 'the narrow road' taken just another dead end, with yet another lamb ultimately drifting from the wayside and from the shepherd.

Words of Caution

Some points covered in this presentation are likely to be somewhat controversial, and yet this may be due to simple misunderstandings. So, in closing, some common misconceptions will be described to prevent unnecessary controversies from arising (see also Granqvist 2006: Kirkpatrick 2005). First, it should be understood that the attachment account of religion that my colleagues and I are working with rests, quite simply, on an agnostic position with regard to the metaphysical question of God's existence. We study part of the psychological foundations of matters of religion, and we do not study the metaphysical veracity or feasibility of those matters. In other words, any attribution of ontological reduction or 'embracement' to our position simply reflects a grave misunderstanding of what we aim to do. Also, anyone going out on an ontological tangent based on the research presented here is advised to entertain the possibility that they are treading the territory of genetic fallacies. I normally take these points for granted but they may be worth explicating in this context, as we are engaged with science-theology connections (or disconnections).

Second, due to its focus on the calibrating influence of early interactions on the formation and development of mental representations, attachment theory is sometimes misunderstood to represent 'hard' determinism. However, hard determinism is incompatible with the internal *working* model (IWM) construct. Indeed, part of the reason that Bowlby (1973) elected to borrow that construct from theories in cybernetics and artificial intelligence, rather than make use of more static terms such as object representation or schema, was to express the idea that the attachment system (i.e. a goal-directed system) utilizes feedback from the environment to update and sometimes transform IWMs. Thus, if caregiver sensitivity and other parameters of importance for child attachment change markedly and these changes last over time, then the child's IWMs will eventually be transformed to accommodate these changes. An insecure child may become secure, and *vice versa*. Bowlby (1973) conjectured that IWMs would normally display continuity but that discontinuity certainly does occur, and in lawful ways. This position is in keeping with 'soft' determinism.

Third, and relatedly, scholars who hold higher intellectual principles of religious thought dearly may be concerned that an emphasis on the attachment-emotion configuration infantilizes religion. At the outset of this chapter, I clarified that the attachment system is believed to be active throughout life and that manifestations of attachment in adulthood are therefore not to be understood as regressive or a sign of (over-) dependency. Indeed, Bowlby (e.g. Bowlby 1969/1982, 1980, 1988) often emphasized that an ability to develop attachments is a sign of healthy development throughout life. And adults do develop attachment relationships not just with God or other religious entities, but also with spouses, close friends, and long-term psychotherapists. Thus, the attachment-emotion account does not infantilize religion anymore than it infantilizes those other relationships. In fact, concerns about the infantilization of religion might stem from a Western-biased, somewhat dismissive understanding of human adults as independent (rather than inter-dependent) and as for most part intellectual (rather than equally emotional). Such an understanding not only turns a blind eye to human nature, but also serves to restrict religion from some of its vital psychological functions, and therefore runs the risk of making religion even more obsolete for the modern man and woman.

Fourth, although the consideration of the attachment-emotion configuration represents an important contribution to the psychology of religion, it by no means represents an exhaustive psychological account of religion. Indeed, attachment theory is not and cannot be about every conceivable aspect of religion, but is applicable primarily to its relational, representational, and distress-regulating aspects. There are clearly many other routes to and aspects of religion than those which attachment theory delineates, and many other frameworks required for a comprehensive understanding of religion (e.g. Kirkpatrick 2005; Paloutzian and Park 2013). Similarly, just as there is no such thing as religion without emotion, the same can be said for religion without cognition.

Finally, it is regrettably an open question whether the religion-as-attachment model applies outside of the Judeo-Christian faith traditions. This is because of the

absence of systematic research within other faith traditions. Naturally, attachment theory seems particularly applicable within theistic faith traditions that acknowledge a personal relationship between believers and the deity, but this does not rule out the possibility that non-theists may also behave and act in corresponding ways (e.g. Buddhists praying to Buddha or to ancestral spirits).

Yet attachment is not an inevitable aspect of religion. From an evolutionary point of view, attachment was not designed for 'religious purposes'. Rather, matters of religion piggy-back on the attachment system as well as on other evolved psychological mechanisms (cf. Granqvist 2006; Kirkpatrick 2005). I hasten to add that religion is not a thing or a natural property, but a word developed to bring a host of certain observables together conceptually (e.g. certain forms of metaphysical beliefs, certain interpretations of subjective experience, and certain behaviors, such as rituals). Those observables may or may not combine into what is currently understood as 'religion' according to one definition or another, and they may well differ from one religion to the other. In any event, it is not surprising that religion, considered as a construct, also has fuzzy boundaries indeed. Nevertheless, and as this paper has hopefully illustrated, the consideration of how the attachment-emotion configuration may be expressed in religion represents an important piece of the larger puzzle of how emotion shapes the world and the way that we perceive it.

Bibliography

- Ainsworth, M. D. S. (1985). Attachments across the life span. Bulletin of the New York Academy of Medicine, 61, 792–812.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the Strange Situation. Hillsdale: Erlbaum.
- Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2009). The first 10.000 Adult Attachment Interviews: Distributions of attachment representations in clinical and non-clinical groups. *Attachment & Human Development*, 11, 223–263.
- Bowlby, J. (1969/1982). Attachment and loss: Vol. 1. Attachment. New York: Basic Books.
- Bowlby, J. (1973). Attachment and loss: Vol. 2. Separation: Anxiety and anger. New York: Basic Books.
- Bowlby, J. (1980). Attachment and loss: Vol. 3. Loss. New York: Basic Books.
- Bowlby, J. (1988). A secure base: parent-child attachment and healthy human development. London: Routledge.
- Camras, L. A., Oster, H., Campos, J. J., & Bakeman, R. (2003). Emotional facial expression in European-American, Japanese, and Chinese infants. *Annals of the New York Academy of Sciences*, 1000, 1–17.
- Cassibba, R., Granqvist, P., Costantini, A., & Gatto, S. (2008). Attachment and God representations among lay Catholics, priests, and religious: A matched comparison study based on the Adult Attachment Interview. *Developmental Psychology*, 44, 1753–1763.
- Cassibba, R., Granqvist, P., & Costantini, A. (2013). Mothers' attachment security predicts their children's sense of God's closeness. *Attachment & Human Development*, 15, 51–64.
- Cassidy, J. (1994). Emotion regulation: Influences of attachment relationships. *Monographs of the Society for Research in Child Development, 59*(2–3), 228–249.

- Cassidy, J., & Berlin, L. J. (1994). The insecure/ambivalent pattern of attachment: Theory and research. *Child Development*, 65, 971–991.
- Cassidy, J., & Shaver, P. R. (Eds.). (2008). Handbook of attachment: Theory, research, and clinical applications (2nd ed.). New York: Guilford.
- Claesson, K., & Sohlberg, S. (2002). Internalized shame and early interactions characterized by indifference, abandonment and rejection: Replicated findings. *Clinical Psychology & Psychotherapy*, 9, 277–284.

Cohen, L. (1993). The future. Los Angeles: Columbia Records.

- De Wolff, M. S., & Ijzendoorn, M. H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child Development*, 68, 571–591.
- Ekman, P. (1992). An argument for basic emotions. Cognition and Emotion, 6, 169-200.
- Granqvist, P. (2006). Religion as a by-product of evolved psychology: The case of attachment, and implications for brain and religion research. In P. McNamara & E. Harris (Eds.), Where God and Science Meet: How brain and evolutionary studies alter our understanding of religion (The neurology of religious experience, Vol. 2, pp. 105–150). Westport: Praeger Perspectives imprint/Greenwood Publishers.
- Granqvist, P., & Hagekull, B. (1999). Religiousness and perceived childhood attachment Profiling socialized correspondence and emotional compensation. *Journal for the Scientific Study of Religion*, 38, 254–273.
- Granqvist, P., & Hagekull, B. (2003). Longitudinal predictions of religious change in adolescence: Contributions from the interaction of attachment and relationship status. *Journal of Social and Personal Relationships*, 20, 793–817.
- Granqvist, P., & Kirkpatrick, L. A. (2004). Religious conversion and perceived childhood attachment: A meta-analysis. *The International Journal for the Psychology of Religion*, 14, 223–250.
- Granqvist, P., & Kirkpatrick, L. A. (2013). Religion, spirituality, and attachment. In K. Pargament (Ed.), APA Handbook for the psychology of religion and spirituality (Context, theory, and research, Vol. 1, pp. 129–155). Washington, DC: American Psychological Association.
- Granqvist, P., & Kirkpatrick L. A. (in press). Attachment and religious representations and behavior. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed.). New York: Guilford.
- Granqvist, P., Ljungdahl, C., & Dickie, J. R. (2007a). God is nowhere, God is now here: Attachment activation, security of attachment, and perceived closeness to God among 5–7 year-old children from religious and non-religious homes. *Attachment & Human Development*, 9, 55–71.
- Granqvist, P., Ivarsson, T., Broberg, A. G., & Hagekull, B. (2007b). Examining relations between attachment, religiosity, and New Age spirituality using the Adult Attachment Interview. *Developmental Psychology*, 43, 590–601.
- Granqvist, P., Hagekull, B., & Ivarsson, T. (2012). Disorganized attachment promotes mystical experiences via a propensity for alterations in consciousness (Absorption). *The International Journal for the Psychology of Religion*, 22, 180–197.
- Granqvist, P., Broberg, A. G., & Hagekull, B. (2014). Attachment, religiousness, and distress among the religious and spiritual: Links between religious syncretism and compensation. *Mental Health, Religion and Culture, 17*, 726–740.
- Hesse, E., & Main, M. (2006). Frightened, threatening, and dissociative (FR) parental behavior as related to infant D attachment in low-risk samples: Description, discussion, and interpretations. *Development and Psychopathology*, 18, 309–343.
- Hood, R. W., Jr., Hill, P. C., & Spilka, B. (2009). *The psychology of religion: An empirical approach* (4th ed.). New York: Guilford.
- Isabella, R. A., & Belsky, J. (1991). Interactional synchrony and the origins of infant-mother attachment: A replication study. *Child Development*, *62*, 373–384.
- James, W. (1902). The varieties of religious experience. New York: Longmans, Green.

- Kaufman, G. D. (1981). *The theological imagination: Constructing the concept of God.* Philadelphia: Westminster.
- Kirkpatrick, L. A. (1998). God as a substitute attachment figure: A longitudinal study of adult attachment style and religious change in college students. *Personality and Social Psychology Bulletin*, 24, 961–973.
- Kirkpatrick, L. A. (2005). Attachment, evolution, and the psychology of religion. New York: Guilford Press.
- Kirkpatrick, L. A., & Shaver, P. R. (1992). An attachment theoretical approach to romantic love and religious belief. *Personality and Social Psychology Bulletin*, 18, 266–275.
- Leary, M. R., Koch, E. J., & Hechenbleikner, N. R. (2001). Emotional responses to interpersonal rejection. In M. Leary (Ed.), *Interpersonal rejection* (pp. 145–166). New York: Oxford University Press.
- Lewis, M., & Brooks-Gunn, J. (1979). Social cognition and the acquisition of self. New York: Plenum.
- Liotti, G. (2006). A model of dissociation based on attachment theory and research. *Journal of Trauma and Dissociation*, 7, 55–73.
- Main, M. (1981). Avoidance in the service of attachment: A working paper. Behavioral Development: The Bielefeld Interdisciplinary Project, 651–693.
- Main, M. (1991). Metacognitive knowledge, metacognitive monitoring, and singular (coherent) vs. multiple (incoherent) models of attachment: Findings and directions for future research. In C. M. Parkes, J. Stevenson-Hinde, & P. Marris (Eds.), *Attachment across the life cycle*. London: Tavistock/Routledge.
- Main, M., Goldwyn, R., &Hesse, E. (2003). Adult attachment scoring and classification system. Unpublished manuscript, University of California at Berkeley.
- Otto, R. (1923). The idea of the holy. London: Oxford University Press.
- Paloutzian, R. F., & Park, C. (Eds.). (2013). Handbook of the psychology of religion and spirituality (2nd ed.). New York: Guilford Press.
- Pargament, K. (1997). The psychology of religion and coping. New York: Guilford Press.
- Scherer, K. R. (2005). What are emotions? And how can they be measured? *Social Science Information*, 44, 695–729.
- Smith, T. B., McCullough, M. E., & Poll, J. (2003). Religiousness and depression: Evidence for a main-effect and the moderating influence of stressful life-events. *Psychological Bulletin*, 129, 614–636.
- Spilka, B., Hood, R. W., Jr., Hunsberger, B., & Gorsuch, R. (2003). The psychology of religion: An empirical approach (3rd ed.). New York: Guilford Press.
- Sroufe, L. A. (1979). The coherence of individual development: Early care, attachment, and subsequent developmental issues. *American Psychologist*, 34, 834–841.
- Sroufe, L. A., & Waters, E. (1977). Attachment as an organizational construct. *Child Development*, 48, 1184–1199.
- Sroufe, L. A., Egeland, B., Carlson, E., & Collins, W. A. (2005). The development of the person. New York: Guilford.
- Thomson, P., & Jaque, S. V. (2014). Unresolved mourning, supernatural beliefs and dissociation: A mediation analysis. *Attachment & Human Development*, *16*, 499–514.
- Ullman, C. (1982). Change of mind, change of heart: Some cognitive and emotional antecedents of religious conversion. *Journal of Personality and Social Psychology*, 42, 183–192.
- van IJzendoorn, M. H., Schuengel, C., & Bakermans-Kranenburg, M. J. (1999). Disorganized attachment in early childhood: A meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*, 11, 225–249.

Pehr Granqvist was awarded his PhD at Uppsala University in 2002, for a dissertation testing the applicability of attachment theory to religion. Since then, he has continued to study this topic as well as other matters both in the psychology of religion and the field of attachment. He has received two international research awards for his work on the attachment-religion connection, to which he has also contributed many empirical papers and book chapters. He is currently Professor in psychology (especially developmental psychology) at the Department of Psychology, Stockholm University.
Chapter 3 Post Traumatic Stress, Moral Injury, and Soul Repair: Implications for Western Christian Theology

Rita Nakashima Brock

Abstract This paper explores the soteriological differences in two Christian theological systems and their usefulness in supporting recovery from post-traumatic stress disorder (PTSD an anxiety-trauma disorder, and moral injury, a disruption of moral conscience and collapse of a person's moral foundations. The first system, a first-millennium soteriology based in incarnation and resurrection, grounded systems of penance that were required of warriors to restore their souls. The second, based in atonement ideas that emerged in the eleventh-century with the crusades in Europe, constructed a meaning system of redemption that sanctified war and traumatic suffering and eventually abandoned penance for warriors. It is the argument of this paper that atonement theology reenacts and reinforces trauma rather than supporting recovery from trauma and human well-being.

Keywords Post-traumatic Stress Disorder (PTSD) • Neuroscience • Moral injury • Military veterans • Sin • Atonement • Theosis • Incarnation • Resurrection • Penance • War • Crusades

Christianity's first millennium was characterized by a this-worldly, life-affirming optimism about human life and creation, grounded in a theology of incarnation and resurrection (Brown 2003; Wilken 2003). The second millennium in the West saw the emergence of holy war, an other-worldly apocalypticism, and the sanctification of suffering, grounded in atonement theology (Bartlett 2001; Brock and Parker 2008). This paper explores the implications for recovery from trauma and suffering in these two systems using current research on post-traumatic stress disorder (PTSD) and moral injury in military combat veterans.

R.N. Brock (🖂)

© Springer International Publishing Switzerland 2016

Soul Repair Center, Brite Divinity School, Texas Christian University, Fort Worth, TX, USA e-mail: r.n.brock@tcu.edu

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_3

PTSD and Moral Injury: Definitions and Distinctions

Until the American Psychiatric Association first recognized PTSD in 1980 as a legitimate diagnosis, PTSD was regarded as cowardice, a failure of character, or mental weakness in combat soldiers (Trimble 1985). Now it is understood as caused by repeat, prolonged, and/or intense exposure to terrorizing, life-threatening conditions (Friedman et al. 2011), and the agent of trauma is recognized as outside the individual, rather than as an inherent inner neurosis or weakness. At least one-fourth of U.S. military combat veterans have PTSD. Extreme or catastrophic events, such as torture, natural disasters, or rape are also predictable factors. PTSD can emerge after one exposure to terror, and a prior history of it makes a person more susceptible to further trauma. Living in a threatening environment can deepen a normal stress response into a cluster of symptoms that can recur throughout life and lead to lifelong negative consequences, referred to as 'Complex' PTSD (Herman 1992). Imprisonment, childhood sexual abuse, domestic violence, and violent neighborhoods are such environments, and in the United States, conservative estimates suggest that 7 % of civilians today have PTSD, with women afflicted at twice the rates of men (Kessler et al. 2005).

Fear is the trigger for PTSD. Symptoms include nightmares, nervous agitation, elevated heart rates and breathing, or panic attacks. Sometimes a person can remain in a constant state of fear arousal, startle easily, and be unable either to calm down or to sleep for any length of time. Substance abuse is common as a form of self-medication, and some suffers will avoid situations that might cause a traumatic flashback, which is a re-living of trauma, rather than a memory of it. In fact, loss of memory is common with PTSD, even as a person can feel possessed by intrusive flashbacks or uncontrollable anger. A capacity for intimacy is often significantly diminished or impossible. The most severe symptoms are a form of psychosis: dissociation from the present, berserk rage, violence against others, and suicidal ideation (Shay 1994; U.S. Department 2013).

Neuroscience research on brain plasticity and PTSD reveals that terror can change the brain, and it can lead to physical stress damages to the body, especially if the source of terror is ongoing and the activation of fear is repeated many times. Areas of the limbic or mid brain, responsible for perception and emotions, grow new tissue to handle the overload of fear while the memory-processing hippocampus loses density. Density also diminishes in the prefrontal cortex, the 'executive brain,' which regulates emotions, guides perception, manages behavior, and connects immediate to past perceptions and events to organize memories.¹ It processes information through a complex signaling circuitry that is connected to and influenced by other areas of the brain, and it imposes pattern and meaning, enables empathy, judges morally, and reasons logically.

¹See Bremner 2011 for a comparison of MRI images of brains with and without PTSD. He notes that intense fear impairs 'the hippocampus, a part of the brain involved in learning and memory, as well as in the handling of stress' and its partner, 'the medial prefrontal cortex, an area of the brain that regulates our emotional response to fear and stress.'

The fear response is more rapid than conscious thought and is a highly contagious emotion, communicated unconsciously as an adaptive, collective response to danger. Fear-induced sweat, laden with stress hormones, differs from ordinary perspiration, a difference that our sensory systems can detect and mirror, like a viral contagion. The lower brain stem elevates heart rates and breathing and prepares the muscles for extreme action, while suppressing the release of the well-being hormone, dopamine.

In attending to what they heard in treating PTSD, a team of Veterans Affairs (VA) clinicians proposed an additional factor in the suffering of combat veterans that they called 'moral injury' (Litz et al. 2009). The term was first suggested in 1994 by VA psychiatrist Jonathan Shay in *Achilles in Vietnam* as a dimension of PTSD related to the undoing of character. Shay defines moral injury as requiring three aspects: (1) a betrayal of 'what's right' (2) by someone who holds legitimate authority (3) in a high-stakes situation (Shay 1994: 21, 152). Brett Litz and his colleagues defined it as a 'disruption in an individual's confidence and expectations about his or her own moral behavior or others' capacity to behave in a just and ethical manner' (Litz et al. 2009: 700). The clinicians suggested that it remained untreated because it had not been adequately distinguished from PTSD. Moral injury often occurs with PTSD and shares some symptoms with it, such as anger, addiction disorders, anxiety, and depression, but each can also occur alone. Moral injury involves guilt, shame, grief, humiliation, and contrition. Alternative terms for it include 'inner conflict' or 'spiritual injury' (Drescher et al. 2011).

Moral injury is an evaluative response to morally ambiguous conditions of extremity. The urgencies of rapid choices in emergencies and having to witness horrifying events can disrupt moral foundations through misused or failed personal agency. War inflicts multiple losses without adequate means to address profound grief at multiple losses, not only the deaths of comrades but also of faith or innocence. It can involve shame for violating one's core moral values, not being able to help victims, and remorse at causing harm. Survivor guilt is a common form of moral injury, a feeling of unworthiness at having survived when others die, or of guilt at failing to save them (Brock and Lettini 2012). Violent death, especially, can be difficult to process, as human beings experience natural disgust and horror at encountering human remains, and the rituals of respect for corpses must often be ignored in combat (Synder 2014).

Some of the deepest shame and self-condemnations involve killing (Maguen et al. 2011), especially when it violates the moral code of the military, such as killing innocent civilians or members of one's own side, or killing out of anger, elation, or a lust for vengeance (Dewey 2004: 73–96). Such acts can lead to humiliation, feeling judged by God, being angry at God, or losing faith in God. War combatants can experience their moral struggles as a profound spiritual crisis that impairs their ability to thrive or re-integrate into their families and civilian life, and that isolates them from society. One U. S. veteran of the war in Afghanistan stated, 'I'm not religious or anything, but I think God hates me for all the things I did over there' (Junger 2014). To make such a judgment requires the cultural specificity of a system

of moral values and its idea of 'God.' To process such a judgment and rebuild a moral identity requires a long process of reflection and integration.

Whatever the aspect of the inner struggle to come home from war, there is no possibility of returning to an earlier, innocent self, but there is the possibility of integrating moral injury into a life after war and recovering. Scientific study of moral injury is nascent, but clinicians such as Maguen and Litz (2011) propose a treatment called Adaptive Disclosure that involves 'imaginal exposure' to precipitating incidents that reveal 'beliefs and meanings in this emotionally evocative context,' as well as 'imaginal conversations' with victims or a 'compassionate and forgiving moral authority.' Beyond clinical treatment, however, is the necessity of further research 'involving larger systems that can facilitate recovery from moral injury..., particularly across disciplines that integrate leaders from faith-based and spiritual communities, as well as other communities from which individuals seek support' (Maguen and Litz 2011: 3).

A clinician can invite an imaginal conversation as a step in the process of recovery, but more is needed beyond the context of therapy, especially for those veterans who lack access to clinical help or who reject the idea that moral injury is a psychological disorder and do not seek treatment. Moral injury involves collective moral and spiritual meaning systems, even if they are unaccompanied by personal belief or participation in a ritual community. Hence, actual religious leaders and communities can be crucial partners in supporting lifelong recovery from moral injury. Research shows, however, that the meaning system of the community and the kind of support it offers can be crucial factors that support or impede recovery, perhaps because mirroring behaviors are such an important aspect of human social life (Knowles 2013).

Harsh, judgmental, and punishment-based religious systems fail to support recovery from moral injury and can even aggravate it, as do those that offer formulaic pieties and a 'hollow reductionistic insistence, commonly found in both theologies and therapies, that trauma survivors find clean, easy, and quick redemption' (Drescher et al. 2013). Processing the anguishing conditions of extremity is impeded when experience is evaluated as simply either good or evil, victim or perpetrator, innocent or guilty, powerful or helpless. These polarizations can short-circuit the restoration of empathy for those one has harmed, which is an important aspect of the re-humanization of a dehumanized enemy (Boudreau 2011) – and even of overcoming self-condemnation.

Recovery from moral injury is a relational journey, and it is best undertaken with those who can be trusted to withhold judgment, to avoid imposing facile answers, to respect doubt and anger, and to accept what is shared with an open heart. That journey requires the friendship of mutual vulnerability and empathy from those who can set aside their own needs, political opinions, beliefs, and anxieties. Trusted friends must listen with an open heart to the anguish of moral injury, be transformed by what they take in, and examine their own relationship to socially sanctioned violence such as war (Brock and Lettini 2012). In that process, no one can remain unchanged.

Moral injury points to the importance of social meaning systems, personal agency, and moral conscience in the experience of trauma. Recent discussion of the moral emotions in relation to virtue ethics points to the importance of the human capacity for empathy and the social impact of trauma in relation to moral injury and agency (Drescher et al. 2013; Papanikulaou 2013). A traumatized person who focuses all responsibility and blame on others and feels, or is made to feel, a helpless victim can have great difficulty recovering and rebuilding a moral identity because she or he feels powerless to make changes for the future. Persons who claim their own agency in trauma are better able to recover and to reach out to others (Herman 1992) because having a sense of personal power is the first step toward spiritual integration and recovery. When people struggle to take some personal responsibility for a traumatic experience, even if it seems unwarranted, they are better able to integrate memories that can be interrogated in the recovery process.

Moral injury is an ancient human response to war found in most war literature, including sacred texts such as the Bhagavad Gita and the Bible, and many ancient religious traditions offered ritual processing for returning warriors. For a millennium, Christian practices of penance, adapted from Judaism, understood that shedding human blood was a sin no matter the justification because it deeply violated moral conscience and damaged the soul. To be restored, those who killed were expected to confess what they did, undertake purifying disciplines such as fasting and prayer, make recompense when possible and be present at worship in the order of penitents so that the entire community could pray for them, support their struggle to recover, and hold them accountable for their commitments to making amends. Like catechumens, penitents were dismissed before the Eucharist feast from which they had been formally excommunicated (Brock and Parker 2008: 184–185).

These practices have not been used for many centuries in the Christian West (Verkamp 2005), but a number of current societies maintain ritual healing processes for those who kill. For example, the American Navajo 'Enemy Way' ceremonial is offered to those who encounter violence and death outside the ordinary cycles of life, and it restores them to beauty – to right relationship with all the powers of life and death (Nez and Avila 2011). Ancient penance and contemporary community-based responses to extremity capture the full impact of trauma and its reach beyond clinical contexts and individual therapy. In modern terms, they understood that mirroring brain functions and empathetic responses spread trauma into families and communities, which must be included in recovery (Knowles 2013).

A Soteriology for Recovery

The ancient Christian penance system was grounded in incarnation, incarnation of the Spirit in creation and in humanity, exemplified in Jesus Christ, who taught humanity how to live. This theology understood that 'Christ becomes "incarnate" that we might be "ingodded" (Athanasius in Brock and Parker 2008: 176). Personal responsibility was required but the salvation delivered was collective. Divinity was

conferred on the community, the body of Christ, via baptism, each for all. In being baptized in the Jordan, Jesus heralded a sanctified humanity, which received life everlasting and the power to do deeds that are divine. This divine ministry is referenced in John 10: 34–38 and captured in Psalm 82:

Give justice to the weak and the orphan; Maintain the right of the lowly and the destitute. Rescue the weak and the needy; Deliver them from the hand of the wicked. (Ps. 82: 3–4).

The incarnation of the Spirit in Jesus was confirmed by resurrection, through which he overcame the powers of death and the annihilation of love. The Gospel of John places the post-crucifixion reunion of Jesus and Mary in a garden, which informed the ancient Christian idea that the resurrection of Jesus Christ reopened the closed gates of the earthly paradise and planted 'the church ... as the paradise in this world' (Irenaeus in Brock and Parker 2008: 89). This sense of paradise-reopened inspired ideas of how the entire earth is encircled by the rivers of Genesis 2, so that the body of Christ is the 'assembly of saints [that] bears resemblance to paradise,' in the words of the fourth-century Ephrem of Syria (Brock and Parker 2008: 98). Augustine asserted that 'all of creation shares in the essential qualities of paradise' (Brock and Parker 2008: 104). The fourth-century Cyril of Jerusalem referred to himself as a porter who aided those about to cross the baptismal 'portal to paradise' (Brock and Parker 2008: 115).

The Spirit in creation sanctified life in this world as blessed, 'a smiling place' (Augustine in Brock and Parker 2008: 104). The church's vocation was to alleviate suffering to maintain that place. Its work was regularly enacted in the ritual of the Eucharist feast of abundance, hosted by the Risen Christ, the 'life breath of this diseased world' in the words of Ephrem (Brock and Parker 2008: 98). At the feast, the entire community living and departed gave thanks for the generosity of God, enacted love for each other, sought forgiveness for sins, prayed as 'bloodless' sacrifice, and made offerings for the good of the world. The scriptural texts most commonly associated with early images of the Eucharist, found in the catacombs and first millennium churches, tell of the feeding of the multitude with loaves and fish (Brock and Parker 2008: 166), reiterated in the injunction, 'Do you love me? ... Feed my sheep' (John 21: 17).

The body of Christ journeyed together toward divinity, what the Eastern Orthodox Church calls *theosis* (Brock and Parker 2008: ch. 7, Papanikulaou forthcoming). Hence, while personal responsibility was required for *theosis*, it was a community process. Worship trained the whole person through rituals, which provided aesthetic, emotional, spiritual, physical, and intellectual attunement to a world created as good, beautiful, and delightful. The images, choreography, sounds, and smells of worship focused the senses and feelings to perceive the Spirit-infused world and to love it and each other more profoundly.²

²Graybiel (2008) discusses preliminary research on neuroplasticity and the power of rituals that influence 'social, emotional, and action functions of the brain' (359).

Love had multivalent meanings in relation to *theosis*, which is grounded in a thick understanding of moral virtues (Papanikulaou 2013). To know God was to love each other and to grow in love through a circle of reciprocity, grounded in such virtues as generosity, justice, knowledge, humility, empathy, trust, integrity, and gratitude (Ephrem in Brock and Parker 2008: 98–99). The measure of such love was to demonstrate it to those toward whom one felt anger, envy, or hatred. Love was not the sacrifice, or absenting, of the self but the journey of self-mastery and the integration of the 'sensible, irascible, and rational' aspects of the self (Papanikulaou 2013: 242).

Theosis was a power that carried moral responsibility to use it for the good of the world. In the realm of the dead, Satan was prohibited, but in this life, harm was always lurking. To sustain paradise, the church had to resist evil in the world, in the community, and in individuals. To be 'partakers in the divine nature' (2 Peter 1: 4), the saints needed to cultivate knowledge, steadfastness, courage, compassion, and, especially, wisdom. Without wisdom, people might unknowingly use their power to inflict great harm, just as great good might be achieved by the wise. In accepting the possession of power in all human beings and the social nature of human existence, a theology of *theosis* involved regular ritual training in moral virtue as a crucial aspect of human thriving.

That training was not foolproof, so regular prayer and confession for 'venial sins which this life is never without' were aspects of worship (Augustine in Brock and Parker 2008: 182–183). The more serious sins of adultery, apostasy, and shedding human blood, however, required special handling. The elaborate, lengthy ritual of penance was designed for those who committed virtually unpardonable sins, sins that cut to the core of their souls, broke their spirits, and threatened the entire community because those who sinned carried unprocessed harm inside them. They might harbor within them hatred, violence, fear, despair, deceit, greed, lust, or cowardice.

Penance acted as a ritual quarantine system that protected the community from harm by clear identification of those struggling to recover, those who needed the community to help expel their demons. In identifying those among them who were ex-communicated, the community prayed for their afflicted members and held them accountable for getting better. Penitents took responsibility for their behavior by demonstrating guilt, shame, grief, remorse, and contrition in worship and by making amends. Once a term of penance was completed, penitents were absolved and ritually returned to the Eucharist.

Given descriptions in ancient war literature of PTSD and moral injury (Shay 1994), it should come as no surprise that early Christians understood the lingering harm of war service. While war might sometimes be necessary or just, shedding human blood remained a sin. The taking of another human life, regardless of the cause, required a serious course of penance because killing harmed the Spirit of love (Papanikulaou forthcoming). Violence, committed or witnessed, compromised empathy, compassion, and trust, and it impacted entire communities. It drew one away from the Spirit. The responsibility of the community, the body of Christ, was to restore the soul to love, to God, and to relationships, which was humanity's everlasting destiny in this life and the next.

Atonement and the Sanctification of Trauma

In Western Christianity's second millennium, paradise became an unearthly utopia and receded into an inaccessible region of the afterlife. This world was to be endured until God destroyed it and created a new heaven and earth. And Jesus died, cruelly, at every Eucharist. Depictions of the crucified Christ first emerged in the middle of the ninth century and became increasingly grotesque and bloody. Ellen Ross (1997) suggests these changes in medieval Western Christian art reflect a greater sensitivity to human suffering as a passably human, suffering Christ replaced an impassive, transcendent one. The incarnate deity became one who fully experienced human struggles with violence, betrayal, and loss.

However, images of crucifixion emerge simultaneously with images of the punishments of hell and Jesus or God as an enthroned judge. At the threshold of many Gothic churches, under a carving of the last judgment, a stern, enthroned Christ divides the saved and the damned. Hell was a gaping maw of torture, a huge serpent swallowing its human prey, a grinding machine of torture, or a raging fire of anguished souls. Saints were depicted being burned alive, disemboweled, pierced with arrows, or mauled by wild beasts.

The developments that led to such iconography began after the sixth century. Western Europe fragmented into warring dynasties and waves of invaders arrived from the east, south, and north, and the Carolingians emerged in the eighth century to consolidate a new empire. Their opponents to the north and east of the Rhine, the Saxons, began moving southward, and in 772, Charlemagne began a three-decade war on the Saxons. As one conquest strategy, he forced them, under penalty of death, to be baptized into his version of Latin Christianity. In imitation of hagio-graphic legends about Constantine's sword, Charlemagne altered the Christian prohibition against shedding human blood, wielded the sword to missionize, and used Latin Christianity as the ideological support for war and colonization.

The Saxons defended their Christianity, which carried forward earlier forms, against Charlemagne's bishops. The Saxon mix of pagan and Christian myths, much like other pre-Carolingian Christian practices throughout Gaul, venerated ancestors, the shrines of saints, springs, and sacred trees. Such practices 'brought down from heaven to earth a touch of the unshackled, vegetable energy of God's own paradise' (Brown 2003: 164). The Saxon Eucharist took place in the ancient oak groves of Oden, so the Carolingians felled the trees and built churches of the dead wood.

The conflict between the Latin and Saxon Christianities culminated over the meaning of the Eucharist. Charlemagne imposed a single Eucharistic rite across the territories he conquered. The new rite supplanted the older Gallican Rite used throughout much of Europe before 800. In the 830s, the Carolingian theologian Paschasius Radbertus, head of the Corbie monastery in northern Francia where Saxons had been resettled, offered an unprecedented interpretation of the Eucharist: the consecrated elements were the material, historical body of Christ, and the bread and wine made the *crucified* flesh and blood of the Lord present, not the risen Christ.

No one who is sane believes that Jesus had any other flesh and blood than that which was born of the Virgin Mary and suffered on the Cross. And it is that very same flesh, in whatever manner, that should be understood, I believe, when he says: 'This is my body that is given for many,' and 'This is my blood.'³

Radbertus insisted the Eucharist was the means by which 'the lamb is sacrificed daily on the altar by the priest in memory of the sacred passion' (Fulton 2002: 13).

The Latin Eucharist spoke of Christ as 'a pure victim, a holy victim, an unspotted victim' (Cuming and Jasper 1987: 161). Worshippers confronted the crucified Christ, who condemned unrepentant sinners for their crimes. Sinners, enemies of God (and implicitly also Charlemagne), dared not approach the bread and wine without performing sufficient penance, or they would consume damnation. 'Behold, what does the sinner eat and what does he drink? Not flesh and blood useful for himself, but judgment' (Radbertus in Fulton: 56). In Radbertus' Eucharist, Jesus Christ entered a state of perpetual dying on the communion table, so that death, instead of being defeated, became an eternal marker between the saved and the damned. Writing on the Trinity, Alcuin of York claimed that when Christ judged the living and the dead, 'the wicked will see him judging in the form in which he was crucified' (Fulton 2002: 57). The Mass eventually became a re-enactment of the crucifixion:

'Declare him killed and offer him to be sacrificed in his mystery,'... 'Kill! That is, believe him dead for sinners!' In the Eucharistic offering, Christ the fatted calf is daily immolated 'for believers' (Hincmar, in Chazelle 2001: 218–219).

Thus, by ritual murder, repentant Christians obtained the benefit of Christ's sacrificial death on the cross, which redeemed the sins of humanity (Chazelle 2001: 225).

The Saxons opposed this Latin rite, despite imperial punishments: for example, Gottschalk was flogged and imprisoned and his books were burned (Brock and Parker 2008: 235). This infliction of a crucifixion-centered communion eventually resulted in the first monumental image of the dead Christ, in 960 CE, in Saxon lands (Brock and Parker 2008: 223). Fulton (2002) and Chazelle (2001) discuss the emergence of the crucifixion images in the Christian West as a shift towards seeing Christ as a judge-victim in connection with the conversion of the Saxons. With his crucified body, Christ's incarnation revealed divine judgment against humanity's essential corruption and sanctified divine punishment for sin. Without divine rescue, helpless sinners must enter eternal damnation, a threat that gained traction at the millennium with rising expectations of the apocalypse.

A two-century debate over the Eucharist ended when a church council voted it heresy to reject the Latin Mass. Within two decades of the vote, Pope Urban II launched the first crusade in 1095, promising that all who joined the pilgrimage against the infidels in Jerusalem would have all debts and sins forgiven and go straight to heaven (Brock and Parker 2008: 262–265). Instead of being a

³Paschasius, quoted in Fulton (2002: 13). For discussions of his *De corpore et sanguine Domini* see Fulton (2002: 3, 12–16, 55–59) and Chazelle (2001: 215–225). Chazelle, in particular, notes the controversy regarding the new idea of the Eucharist as a re-enactment of the crucifixion.

soul-threatening sin, killing for Christ became the ultimate individual penance and self-sacrifice became the highest love. War became holy, 'God wills it!'

Three years into this first crusade, Anselm of Canterbury, friend of Pope Urban II, argued that the only reason for the incarnation was for Jesus Christ to die for the sins of humanity, which had insulted divine honor. Only the one human who was innocent of sin could restore divine honor by dying in place of all unworthy others. Anselm's theology of atonement had no place for resurrection; he failed even to mention it. Instead, he taught a piety of terror of hell (Brock and Parker 2008: 263–270).

Other twelfth-century theologies also focused on salvation through crucifixion. Two decades younger than Anselm, Peter Abelard rejected his idea of God, who was less than perfect if divine honor needed restoring. Instead, Abelard proposed that in willingly suffering the sins of humanity unto death, Jesus Christ revealed a divine love so perfect and profound that a person's heart would be changed by Christ's terrible suffering and become like Christ, the moral exemplar of love as self-sacrifice and forgiveness unto death. Abelard asserted that love, as self-sacrifice, had no power, and he constructed salvation as inner subjective piety. Abelard had no role for the church, except to confirm what takes place in individual believers as an inner change of heart. Later, Bernard of Clairvaux wrote dozens of sermons on the Song of Songs to enjoin erotic love for the crucified corpse of Christ, and he preached the second crusade (Brock and Parker 2008: ch. 11).

War, instead of being the responsibility of warriors, became the religious meaning system for the entire society (Bartlett 2001; Mastnak 2001). Instead of alleviating fear, terror became inescapable, even post-mortem, where the punishments of purgatory awaited the faithful. To be an unrepentant Christian was to be judged a murderer by Christ the Victim and Judge. At every Eucharist, he accused them of killing him and enjoined love for his sacrifice on their behalf. Those who knelt before him petitioned for mercy for killing him, hoping to escape hell. Contemplation of his death evoked an intoxicating mix of dread and gratitude. To imitate Jesus' self-sacrifice and forgiveness unto death, victims of violence were taught to acquiesce to abuse and forgive their abusers. The greatest love became self-sacrifice, and stoic suffering the highest virtue.

Christ's perpetual suffering and dying began to haunt the Western European imagination, riddling it with diffuse guilt and anxiety about individual existence, a terror of judgment, a sense of death as an ultimate deadline and barrier, and a piety of holy suffering as protection from hell. The church embedded terror in its rituals, in its art, and in the religious imagination of believers. In public squares across medieval Western Europe, executions were mass spectacles of this drama of trauma. The condemned forgave the spectators for murdering them, and the crowd wept in sorrow and gratitude at their 'mystical witnessings' of killing (Merback 1998: 46).

The new religious imagination of medieval Christians impelled their enactment of the destruction of everything for their salvation: lives, trees, cultures, indigenous people, and holy sites – even the earth. Other religions have ideas of holy war. However, the Crusades contained their own unique mixture of adoration for crucifixion and the gift of death, frenzied expectations of apocalyptic judgment, and an inability to distinguish between defeat or victory and death or life. Europe's halfmillennium of failed crusading transmogrified into a hunt for the closed terrestrial paradise. Conquistadors went in search of it, lusting for great wealth and personal glory or immortality. They also sought to hasten an apocalyptic end to this world that would lead to a new heaven and earth.

When fear of punishment is a primary driver for behavior, no one is safe, for anger and aggression are the closest companions to fear, and they fuel insatiable appetites for inquisitions and executions of heretics. Vicious cycles of religious fear pieties stir up paranoia and reinforce trauma. With the atonement as a meaning framework, the Western church offered escape from hell through hellish extreme punishments, required even after death in purgatorial realms. It also constructed desire to endure similar agony and to unite in love with a corpse. This meaning system has haunted Western Christianity with a vision of fallen, helpless humanity, individual salvation, a confusion of trauma-bonds with love, and a punitive, fearbased religious system masquerading as salvation.

Conclusion

As the power of medieval Christianity collapsed under plagues and wars, the Renaissance, Enlightenment, science, and various Reformation Movements revived this-worldly thinking and a humanistic understanding of human nature, but the legacy of atonement theology still haunts Western Christianity. The Eucharist endures as a literal consumption of the corpse or as a symbolic memorial ritual, and ritual is what gives emotional power to ideas (Alcorta and Sosis 2005). Religious rituals matter because they shape attention to what matters, emotional responses to reality, and the meaning of faith (Graybiel 2008).

New research on trauma and moral injury suggests that theologies that sanctify suffering and carry a subtext of terrible punishment for helpless sinners deepen moral injury and feed fear. The man behind the curtain of this ritual drama is a punitive, omnipotent God who requires torture and murder to save humanity and isolates people into private suffering for their moral failures. If someone with moral injury is struggling with such ideas, the first responsibility of a benevolent moral authority is to listen and to seek to understand the meaning system of the afflicted, not to judge or explain it away.

Conversations about moral afflictions are a process of gentle questioning that probe meaning and support people as they move from harsh judgment of themselves or others toward acceptance of what is now a part of their lives. From that acceptance and self-knowledge, they can build a new moral identity, relinquish hate of their enemies, and restore their capacity for empathy and intimacy. Being able to offer an alternative theology can restore life and hope as conversations unfold over time and enable the rebuilding of a life after war (Brock and Lettini 2012), but the goal of such conversations should not be conversion but mutual transformation. Moral injury and trauma need a community that can enact love as the power of life-giving presence that holds people as they struggle to reassemble meaning, grieve losses, integrate heart, mind, body, and soul, and restore life-sustaining relationships so injured by violence. Its rituals must sustain such love, and thereby offer life in the midst of horror, tragedy, and loss. Moral injury is evidence that, despite training to kill and the devastations of war, the soul will inflict severe suffering on a moral person, rather than allow him or her to surrender moral conscience. To honor that Spirit in humanity, that spark of theosis, we must support meaning systems, communities, and ritual processes that, in the presence of moral anguish and self-condemnation, hold sacred the difficult assembling of meaning, the respect for painful truth, the alliance of heart and mind, and the life-sustaining relationships so injured by violence and war.

Bibliography

- Alcorta, C. S., & Sosis, R. (2005). Ritual, emotion, and sacred symbols: The evolution of religion as an adaptive complex. *Human Nature*, 16(4), 323–359.
- Bartlett, A. (2001). Cross purposes: The violent grammar of Christian atonement. New York: Bloomsbury T&T Clark.
- Boudreau, T. (2011). The morally injured. The Massachusetts Review, 52(3-4), 746-754.
- Bremner, J. D. (2011). The invisible epidemic: Post-traumatic stress disorder, memory and the brain. http://www.thedoctorwillseeyounow.com/content/stress/art1964.html?getPage=3. Accessed 31 Aug 2014.
- Brock, R. N., & Lettini, G. (2012). Soul repair: Recovery from moral injury after war. Boston: Beacon.
- Brock, R. N., & Parker, R. A. (2008). Saving paradise: How Christianity traded love of this world for crucifixion and empire. Boston: Beacon.
- Brown, P. (2003). *The rise of Western Christendom: Triumph and diversity, A.D. 200–1000.* San Francisco: Wiley-Blackwell.
- Chazelle, C. (2001). The crucified god in the Carolingian era: Theology and art of Christ's passion. Cambridge: Cambridge University Press.
- Cuming, C., & Jasper, R. C. (1987). *Prayers of the Eucharist: Early and reformed*. St. Joseph: Liturgical Press.
- Dewey, L. (2004). War and redemption treatment and recovery in combat-related traumatic stress disorder. Burlington: Ashgate Pub Ltd.
- Drescher, K., et al. (2011). An exploration of the viability and usefulness of the construct of moral injury in war veterans. *Traumatology*, *17*(1), 8–13.
- Drescher, K., et al. (2013). Morality and moral injury: Insights from theology and health science. *Reflective Practice: Formation and Supervision in Ministry*, 33. http://journals.sfu.ca/rpfs/ index.php/rpfs/article/viewFile/262/261. Accessed 31 Aug 2014.
- Friedman, M. J., et al. (2011). Considering PTSD for DSM-5. Depression and Anxiety, 28, 750–769.
- Fulton, R. (2002). From judgment to passion: Devotion to Christ and the Virgin Mary, 800–1200. New York: Columbia University Press.
- Graybiel, A. M. (2008). Habits, rituals, and the evaluative brain. Neuroscience, 31, 359-387.
- Herman, J. L. (1992). Trauma and recovery: The aftermath of violence. New York: Basic Books.
- Junger, S. (2014). Korengal. http://korengalthemovie.com/. Accessed 31 Aug 2014.

- Kessler, R. C., et al. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 617–627.
- Knowles, C. (2013). Notes toward a neuropsychology of moral injury. *Reflective Practice: Formation and Supervision in Ministry*, 33. http://journals.sfu.ca/rpfs/index.php/rpfs/article/ viewFile/262/261. Accessed 31 Aug 2014.
- Litz, B., et al. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychological Review*, 29(8), 695–706.
- Maguen, S., & Litz B. (2011). Moral injury in veterans of war. *PTSD Research Quarterly*, 23(1), 1–6. http://www.ptsd.va.gov/professional/newsletters/research-quarterly/v23n1.pdf. Accessed 31 Aug 2014.
- Maguen, S., et al. (2011). Killing in combat, mental health symptoms, and suicidal ideation in Iraq war veterans. *Journal of Anxiety Disorders*, 25(4), 563–567.
- Mastnak, T. (2001). Crusading peace: Christendom, the Muslim world, and Western political order. Berkeley: U of California Press.
- Merback, M. B. (1998). The thief, the cross, and the wheel: Pain and the spectacle of punishment in Medieval and Renaissance Europe. Chicago: U of Chicago Press.
- Nez, C., & Avila, J. S. (2011). Code talker: The first and only memoir by one of the original Navajo code talkers of WW II. New York: Penguin Group.
- Papanikulaou, A. (2013). Learning how to love: St. Maximus on virtue. In M. Vasiljević (Ed.), Knowing the purpose of creation through the resurrection: Proceedings of the symposium on St. Maximus the confessor (pp. 239–250). Alhambra: Sebastian Press.
- Papanikulaou, A. (Forthcoming). The ascetics of war: The undoing and redoing of virtue. In P. Hamalis & V. Karras (Eds.), Orthodox perspectives on war. Notre Dame: University of Notre Dame Press.
- Ross, E. (1997). *The grief of god: Images of suffering Jesus in late medieval England*. New York: Oxford University Press.
- Shay, J. (1994). Achilles in Vietnam: Combat trauma and the undoing of character. New York: Scribner.
- Synder, J. (2014, September). Blood, guts, and gore galore: Bodies, moral pollution, and combat trauma. *Symbolic Interaction*. doi:10.1002/SYMB.116.
- Trimble, M. D. (1985). Post-traumatic stress disorder: History of a concept. In C. R. Figley (Ed.), *Trauma and its wake: The study and treatment of post-traumatic stress disorder*. New York: Brunner/Mazel.
- U.S. Department of Veterans Affairs. (2013). DSM-5 Criteria for PTSD. http://www.ptsd.va.gov/ professional/PTSD-overview/dsm5_criteria_ptsd.asp. Accessed 31 Aug 2014.
- Verkamp, G. (2005). Moral treatment of returning warriors in early medieval and modern times. Scranton: U of Scranton Press.
- Wilken, R. L. (2003). *The spirit of early Christian thought: Seeking the face of god*. New Haven: Yale University Press.

Rita Nakashima Brock Ph.D., is Research Professor of Theology and Culture and Founding Co-Director of the Soul Repair Center at Brite Divinity School, dedicated to research and public education on moral injury. A professor of religion and women's studies for 18 years, she also directed the Radcliffe Institute for Advanced Study Fellowship Program at Harvard University (1997–2001) and was a fellow at the Harvard Divinity School Center for Values in Public Life from 2001 to 2002. An internationally distinguished lecturer and award-winning author, her most recent book is Soul Repair: Recovering from Moral Injury After War, co-authored with Gabriella Lettini.

Chapter 4 Shaping Emotions That Shape the World

Marjorie Hall Davis and Karl E. Peters

Abstract The thesis of this essay is that while the world shapes our emotions, we can shape our emotions to shape a better world. Antonio Damasio understands emotions as 'action programs' in contrast to feelings, which are the inner experiences of these programs. Natural selection and early human development shape connections in our brains called the 'social brain network.' Because of variations in our genes, our brains and our life experience, each of us is different in the ways we express emotions and especially empathy. This is illustrated by the Hare psychopathy check list, the screening version. However, experimental work in the lab of Christian Keysers suggests that even psychopaths can show empathy when instructed to do so. In the light of this finding, we suggest that emotions can be trained by working with our feelings. Four kinds of religious practice are briefly summarized: Mindfulness Meditation, Compassion Meditation, Centering Prayer, and Hesychia. Each enables entering into a silent, calm, centered state. We then outline how the Internal Family Systems (IFS) approach to psychotherapy can provide a model of the person that enables one who is centered in Self Leadership to work with her or his inner family system of 'Managers,' 'Exiles,' and 'Firefighters.' This work enables healing of troublesome feelings whose source is often early child experiences such as rape, legacy burdens from ancestors, or the legacies of particular cultural views. We conclude by presenting four cases and a scientific study of how IFS meditative work with feelings facilitates healing so that lives and relationships are improved to shape a better world.

Keywords Emotions • Empathy • Evolution • Homeostasis • Internal Family Systems therapy • Meditation • Prayer • Psychotherapy • Psychopaths • Religion

M.H. Davis (🖂)

K.E. Peters

© Springer International Publishing Switzerland 2016

United Church of Christ, Hartford, CT, USA e-mail: mhdavis283@aol.com

Department of Philosophy and Religion, Rollins College, Winter Park, FL, USA e-mail: kpeters396@cox.net

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_4

Do emotions shape the world? Yes! Does the world shape emotions? Yes! So emotions shape the world, which shapes emotions, which shape the world, which shapes emotions, which shape the world, etc. Is this relational feedback process totally beyond our control? No! So, how can we intentionally shape our emotions which, in turn, shape the world? This will be the focus of our essay.

The World Shapes Our Emotions

The scientific picture of the 'world' in which we live is that of an evolving complex system containing countless subsystems within subsystems. From subatomic particles to a complex planetary world such as Earth, these are all systems of dynamic interactions in which all things are connected. On Earth, human life is the result of many interacting events happening over 4.6 billion years. We have indeed a 'big history,' but it is the history of one individual system interacting with other individual systems, which over time give rise to all individuals belonging to the species *homo sapiens*. Because we are in a stream of dynamic interactions, the emotional behaviors that we exhibit will always make a difference for better or worse, even if we cannot specifically trace the web of our influences that begin with our impact on others close to us, a web that expands outward as one individual affects another, who affects another, and so on. Distinguished scientist Max Rudolf Lemberg puts it this way.

I believe that eternity does not begin after my death; it was before I came and will remain when I die. But above all it is during my life here on earth, and this is indeed the only time during which I am responsible for my contribution to it. ... It is, I believe, untrue that what I have done during my life, however insignificant in itself, will not count from the viewpoint of eternity. What I mean is not that it will be remembered. Nobody remembers the man who split the first flint or lit the first fire. ... Nobody remembers the first woman who spun or planted seeds. My individual unity may be remembered for a few years and that of the great man, Jesus, for thousands of years. It is not important whether my name or any special deed of mine will be remembered; it will certainly not be remembered forever. However, what I have done, whatever it was, good or evil, has become eternal in the sense that it has become an indestructible irremovable part and parcel of the tissue of life of humanity. ... Not only books or discoveries or statements but even passing acts of generosity or lack of it – any-thing which has influenced other persons, adult or child, belongs to the eternal realm, even a mere loving act, thought, or gesture. (Lemberg 1979: 373–74 as quoted in Peters 2002: 74–75)

From the perspective of evolutionary theory, the primary task of any living organism is to live long enough to reproduce itself, and in species such as humans, to nurture offspring so they can do this for themselves. The task is to maintain homeostasis – well-being – in an ever changing environment, so that a person's lineage survives and flourishes in concert with other individual lineages that make up extended families, local communities, nations, and all of humanity in harmony with other species and the planet. Emotions are central to this task.

What Are Emotions?

Following Antonio Damasio and Gil Carvalho (2013: 143–152), we consider emotions to be 'neurological action programs' that are triggered by changes in our internal or external environments and that respond in order to maintain homeostasis and thus assist in survival. Action programs include both drives and emotions. Drives are aimed at satisfying basic, instinctual biological needs such as hunger, thirst, sex, exploration and play, care of progeny, and attachment to mates and offspring. Emotions are 'largely triggered by external stimuli (perceived or recalled). Examples include disgust, fear, anger, sadness, joy, shame, contempt, pride, compassion, and admiration' (Damasio and Carvalho 2013: 145). Feelings are not action programs (drives or emotions), but are 'the mental experiences that accompany body states' (Damasio and Carvalho 2013: 144). This leads to the central issue of this essay: can working with feelings, these internal mental states, affect action programs and resulting behavior? In the second half of this work we will consider how we can intentionally shape our emotions.

Neurological action programs have biologically evolved to maintain homeostasis. Processes of feeding, defending (flight-fight-freeze), and mating are present in all animal species from reptiles to humans. In humans these are found at work in parts of the brain stem including the vagus nerve that connects the body to later evolved brain regions in the limbic system, neocortex and their interconnecting neural networks. In the limbic system, connected to the brain stem, are neural networks involved in the drives, emotions, and feelings mentioned above. Some networks are also connected to the region of the brain that is most highly developed in humans, the neocortex. The neocortex, especially the ventral-medial prefrontal cortex and its connections to other brain areas, is the location of executive functions, processes that manage the emotions. All these connections constitute the Social Brain Network:

The Social Brain Network consists of some cortical regions, some limbic regions and some sub-cortical regions all acting together in ways not yet understood, to produce appropriate social behavior. This network links a set of specialized regions that work together to ensure that we can operate in a tightly knit community. These brain regions allow us to recognize faces, to express empathy, provide nurturance and, importantly, allow us to envision the outcome of our possible actions. (Shoemaker 2014)

Variability in the Expression of Emotions

For normal, healthy individuals, as Shoemaker writes: 'the basic position of the social brain network is to provide empathy, rapid identification of mood and affect in others, a strong sense of fairness, as well as compassion, altruism, and love. The default position of humans from birth, when it is not interfered with by abuse or illness, is to be empathetic, social, and concerned about their fellow human being' (Shoemaker 2012: 817).

However, it is important to understand that, although all humans have a social brain network, all networks are not exactly the same, so that the capabilities to recognize faces, express empathy, provide nurturance and envision outcomes vary among individuals. People differ considerably regarding their emotions and behaviors.

This is shown by variations in those who are interviewed using the Psychopathy Checklist Revised (PCL-R) develop by Robert Hare (1999). The shorter screening version, which is called the PCL:SV, lists the domains and traits that are considered in evaluating the degree to which someone is a psychopath.

Domains	Interpersonal	Affective	Lifestyle	Antisocial
Traits	The person is	The person	The person	The person has a history of
	1. Superficial	4. Lacks remorse	7. Is impulsive	10. Poor behavioral controls
	2. Grandiose	5. Lacks empathy	8. Lacks goals	11. Adolescent antisocial behavior
	3. Deceitful	6. Doesn't accept responsibility	9. Is irresponsible	12. Adult anti-social behavior

Domains and traits of the psychopath [from the PCL: SV] (Babiak and Hare 2009: 27)

If a person clearly has a particular trait that is listed above, the score is 2. If the trait applies only partially or sometimes, the score is 1. If the trait doesn't apply at all, the score is 0. This establishes a scale of 0-24. A total of 0 means that a person has none of the traits – perhaps a saint like mother Theresa. A total of 24 (12×2) means that the person is well above the cut-off score of 18 for psychopathy. Serial killers like Ted Bundy would no doubt receive a very high score. Between 1974 and 1978 Bundy raped and murdered thirty women in at least seven states in the United States. Bundy once called himself '... the most cold-hearted son of a bitch you'll ever meet' (Hare 1999: 23).

It is estimated that those scoring abnormally high make up 1 % of the population and are 'responsible for at least half of the persistent serious and violent crimes committed in North America' (Babiak and Hare 2009: 18). Most people in the general population score less than 3. Those who fall in the midrange 'have a significant number of psychopathic features but they are not psychopaths in the strict sense of the term. ... Many will not be model citizens or very nice people, but others may variously be described as hard-driving, fun-loving, entitled, aggressively ambitious, seriously pragmatic, or difficult' (Babiak and Hare 2009: 30). These are thought to make up 15 % of the population and may be found in business, politics, teaching, and even in ministry (Shouten 2012).

Factors Shaping the Social Brain Network

The behaviors of an individual person stemming from his or her social brain network are shaped by numerous factors. Individual differences in empathy are shaped by genes, neurology, and life experiences, usually in early childhood. Studies of psychopaths show that variations of the gene for the monoamine oxidase enzyme affect human behavior. The low-expression variant of MAOA, known as MAOA-L, 'has been linked in various studies with increased risk of violent and aggressive behaviour. The MAOA gene encodes monoamine oxidase A, an enzyme that degrades amine neurotransmitters, such as dopamine, noradrenalin and serotonin' (Hunter 2010: 667). Those who have the MAOA-L variant are deficient in the enzyme and therefore have an excess of amine neurotransmitters, which cause impulsive behavior including hyper-sexuality, sleep disorder, extreme mood swings and a tendency toward violence and aggression. The same people may also show less development of the connections in the brain between the ventral-medial prefrontal cortex and the amygdala. 'The convergence of findings across distinct demographic samples and experimental contexts suggests that reduced amygdala–vmPFC connectivity may be a consistent neurobiological feature of populations in which callous unemotionality and impaired empathy are major characteristics' (Motzkin et al. 2011).

Besides emotions being shaped biologically by the world through natural selection, they are shaped also by the contemporary environment in which humans live and develop. Numerous studies have shown the importance of adult nurturing of children especially in the first 3 years (National Scientific Council on the Developing Child 2005/2014). When a child grows up in an environment of continual extreme stress, especially without nurturing parents or other nurturing adults, brain development suffers, including the development of executive areas such as the ventralmedial prefrontal cortex. The child then can have difficulty maintaining emotional control and homeostasis. This worsens if a parent, relative, or another person abuses and molests the child, and threatens further harm if the child reports what happened. In these extreme conditions, action programs such as fear and shame work to protect the child. Neural circuits are impaired so that a child may dissociate for protection. Sadness and depression may occur, as well as uncontrolled anger, acting out sexually, and other extreme attempts to self-protect from more neglect and abuse. A combination of genes, brain structure and functioning, and early impaired child development can lead to psychopathy.

Lacking Empathy or Lacking Focus?

Most studies have found that psychopaths lack empathy. Those with a psychopathic personality disorder 'are without conscience and incapable of empathy, guilt, or loyalty to anyone but themselves' (Babiak and Hare 2009: 18). However, Christian Keysers, who heads a lab at the Netherlands Institute for Neuroscience in Amsterdam, has wondered whether it is because psychopaths are neurologically deficient for empathy or that they just do not focus their minds on empathy for others. His work takes into account the earlier work by Tania Singer, which showed that

women shared pain as if vicarious suffering were an automatic process for them, but men seemed able to suppress this suffering whenever the other person had been unfair to them (Singer 2006). Many men also modulate their empathy based on hierarchical relationship. A top manager feels more empathy while firing a fellow manager than while laying off workmen. This modulation [of empathy] may derive from the fact that peers are much more likely to be in a position to reciprocate. In this context, psychopaths' feelings of superiority may represent another extreme of a normal tendency not to be equally empathic toward all people, and the fact that psychopathy is more often observed in males than females also fits this idea. (Keysers 2011: 211)

So Keysers investigated whether the problem with psychopaths was not that they lacked the brain circuitry for empathy but that they had brains that could turn off empathy, even as they could 'get inside' the minds of others to manipulate them. 'A combination of intelligence, shared circuits and the capacity to silence them when inconvenient would be a powerful combination that evolution could favor in order to create humans that thrive by exploitation' (Keysers 2011: 211).

In an experiment in Keysers' lab, Harma Meffert showed movie clips of hands interacting. In some of the movies,

one hand hurts the other by twisting a finger. In others, the two hands lovingly caress each other. In others still, one hand seeks the other, but the other responds with a harsh, rejecting push away. Healthy control participants reported that seeing these movies triggers an empathic feeling: one of pain for the victim of the pain or the rejection, and one of warmth while watching the loving caress. The brains of these healthy participants also showed the activity in premotor, somatosensory and emotional brain regions we would expect if they shared what the actors in the movies were feeling. (Keysers 2011: 213)

How do the brains of psychopaths respond to these movies? When they simply watched the movie clips in the first part of the experiment, the psychopaths used brain regions 'involved in performing their own actions and feeling their own sensations, pains and joys less ... than age-matched control participants without psychopathy.' In the second part of the experiment, the psychopaths were asked 'to deliberately empathize with the people in the movies.' They did this and their shared activity was normalized – and was as strong as that of the controls. Thus, what distinguishes psychopaths from the controls 'is that they do not spontaneously empathize with others – not that they cannot empathize' (Keysers 2011: 214; cf. Abbott 2007; Meffert et al. 2013). Keysers draws out the implications of this experimental finding: 'We hope that the finding that psychopaths do not lack the *capacity* to empathize but the propensity to do so spontaneously, might help focus new therapies' (Keysers 2011: 215).

If it is the case that even criminal, incarcerated psychopaths can exhibit empathy when instructed to do so in an experiment such as this one, we may speculate that it may be possible to train most people to become more empathic. In the following section of our essay, we will suggest that religious and therapeutic practices may help all of us, including psychopaths, to regularly call up our action programs for empathy in our social brain networks. People with more developed empathy can shape a better world.

Shaping Our Emotions That Shape the World

Just as the world shapes human emotions, our emotions shape the world. From an evolutionary perspective, our drives and emotions have evolved through selection by our wider human and natural environment. We are also part of the environment that is exerting selection pressure on others – affecting their basic drives to feed, fight or flee, and mate as well as emotions and feelings such as fear, anger, shame, love, and hope. While we affect others, they in turn affect still others, in the evolving interconnected web of life on our planet. Some of our action programs are prosocial emotions, helping to build cooperative, nurturing, and loving relationships. Other action programs exhibit anger and out of control behavior that threaten the health and even the lives of others. Therefore, we return to the central issue of this essay: how can working with feelings, which are internal mental states, affect action programs (emotions) and resulting behavior to shape the world for the better?

We will now discuss two approaches for shaping our emotions by affecting our internal states or feelings. One grows out of a variety of traditional religious practices of mediation and prayer. The other is the Internal Family Systems Model from contemporary psychotherapy.

Some Traditional Religious Practices

Traditional religious practices of meditation are being used, studied, and adapted to help people to deal more calmly with the pain and stress that often trigger neural action programs (emotions) such as anxiety, anger, and depression.

Mindfulness Meditation

Many meditative practices begin with attention to breathing, being aware of its rhythm in the body and sometimes of the feeling in the nose of air going in and out. We may then bring guiding feelings and images into breathing. A simple meditation from Thich Nhat Hanh illustrates this.

'Breathing in, I calm my body. Breathing out, I smile. Dwelling in the present moment, I know this is a wonderful moment.' He then shortens this to single words or phrases: As we breathe in, we say to ourselves 'Calming,' And as we breathe out, we say 'Smiling.' As we breath in again, we say, 'Present moment,' and as we breath out, 'Wonderful moment'. (Hanh 1997: 16)

Both deep breathing alone and breathing with guiding thoughts and images help calm the emotional action programs.

In mindfulness meditation a person allows awareness of body sensations, feelings of emotions, and external sounds. However, we do not focus or hold on to these but are only aware, letting them come and go of their own accord. If we are drawn into focusing on a particular feeling, thought, or sensation, we returns attention to our breathing and then allow mindfulness to return. Cultivating mindfulness results in our being fully present to ourselves and to all that is around us.

Compassion Meditation

Compassion meditation allows feelings of loving warmth to arise in our awareness, welcoming all feelings, thoughts, and sensations without judgment as they flow in and out of attention. Both forms of meditation may elicit ongoing changes in brain areas such as the left and right amygdala, parts which are important in emotions (Desbordes et al. 2012).

Centering Prayer

Two Christian practices parallel the above practices from Buddhism. Although they are related to different conceptual systems and have goals more explicitly related to the God of Christianity, they also can be understood as paths to wholeness and well-being.

One practice is 'centering prayer' in Roman Catholic Christianity, which is a method designed to turn off our ordinary flow of thoughts and open ourselves to the presence of God. According to Trappist monk Thomas Keating, we should assume a comfortable position, close our eyes, and choose a one or two syllable word. He calls this a 'sacred word' because the intention is to open ourselves 'beyond thoughts, images, and emotions' (Keating 2002 [1986]: 95). We should introduce the sacred word very gently into our imaginations, as if 'laying a feather on a piece of cotton.' When we become aware of any conscious perceptions, we return to the sacred word, finally letting ourselves pass beyond the sacred word 'into pure awareness,' into union with that to which the word points – the Ultimate Mystery, the Presence of God, beyond any perceptions that we can form. ...' (Keating 2002 [1986]: 96).

Hesychia

In Orthodox Christianity, *hesychia* is a path to inner peace and union with God. Practiced first by Christian desert monks alone in their cells, it became an interior practice for living in stillness and silence (Ware 2000: 89–96). The 'Jesus Prayer' is the most prominent way in Orthodoxy of cultivating this inner silence. In a place with no distracting sounds and with eyes closed, we repeat 'Lord Jesus' rhythmically, perhaps with the aid of a prayer rope or our own breathing. This continues until we 'let go' of the multiplicity of disconnected and conflicting thoughts that arise from our conscious and unconscious minds (Ware 2000: 99–102). We finally reach 'true inner silence or *hesychia*,' in which there is no internal speaking but instead listening (Ware 2000: 98).

We might sum up these Buddhist and Christian practices with Thomas Merton's notion of 'prayer of the heart.' Drawing on the Orthodox understanding of *hesychia*, Merton writes that this 'is a prayer of silence, simplicity, contemplative and meditative unity, a deep personal integration in an attentive, watchful listening of 'the heart.' The response such prayer calls forth is not usually one of jubilation or audible witness: it is a wordless and total surrender of the heart in silence' (Merton 1971: 29–30). The word 'heart' in the Hebrew and Christian Bible is a comprehensive metaphor for the self. It occurs over one thousand times. Phrases like 'Serve the Lord with all your heart,' 'Your law is within my heart,' 'Where your treasure is, there your heart will be also,' and 'God searches the heart' – these all are ways of expressing what we often mean by the self that is the core of our being (Borg 2003: 149–151). As we turn from religious traditions to a contemporary approach in psychotherapy, we will be reminded of this notion of 'heart' that is comparable with with the idea of 'Self.'

The Internal Family Systems (IFS) Approach to Psychotherapy

The IFS approach uses a guiding model to reach compassionate mindfulness of inner states and processes. While this model of psychotherapy can be very helpful in healing trauma and other extreme emotional and physical experiences, it can also help all of us to understand and modify our own feelings, emotions, reactions and responses. It can help us understand the dynamic relations of our own internal system, as well as how we may choose to make internal changes which will be echoed in our relationships and interactions in the external world.

Initiated by family therapist Richard C. Schwartz in 1983, IFS takes the model and theory of Family Systems inside the person (cf. Schwartz 2001, 2013a, b, c). Schwartz identifies several 'sub-personalities' that interact internally in a way similar to the way that persons interact with family members and others in the external environment. All sub-personalities, which he calls 'parts,' are valuable because they act in various ways to be 'protectors' of the person (through emotions and feelings). It is likely that they have evolved into their various roles for our evolutionary survival. When not under stress, they can work together harmoniously. However, under pressure, parts may be forced into extreme roles and take over the internal system. They may activate emotions, feelings, sensations, thoughts and images that get the person to 'shape the world' in undesirable, and even in harmful and destructive ways.

The Dynamic Structure of a Person in IFS Language

In the IFS model, parts are identified by how they function in the system, as 'Managers,' 'Exiles,' and 'Firefighters' (see Appendix, Fig. 4.1). At the core or center of a person is the 'Self.' This concept of Self differs from other common

contemporary uses of the word 'self.' It is not a part, but refers to the underlying core of the 'inner family.' It is the inner experience of being in a calm, centered state, with full awareness in the present moment of all that is going on within and without. This same state of consciousness, called being in 'Self-leadership' and 'Self' in secular terms, has been called by various religious traditions: the soul, spirit, sacred center, presence of God, mind of Christ, Buddha nature, atman (Hindu), inner light (Quaker), the beloved (Sufi), and others. For many, IFS therapy has a profound spiritual quality.

When a person is in this state of Self, it can be identified by a felt sense of calm, connection and compassion, and by curiosity, creativity, clarity, confidence and courage. This state is sensed by the person and can also be sensed by others. While in this state of consciousness, called 'Self-Leadership,' the Self can interact with non-extreme parts to work together harmoniously in order to help the person to live more consciously and effectively. The Self is always present, but can become 'eclipsed' by parts in extreme protective roles. The goal of therapy is to bring all parts under the leadership of the Self. When able to do this, a person can be guided by his or her Self consciously to make good decisions in response to others and to events in the wider world.

'Managers' are action programs that function as protectors by exhibiting executive functioning in attempting to keep everything under control, keep us organized, and 'on track.' They can partner harmoniously with Self and other parts to achieve desired goals. When functioning in a positive way, they are valuable in helping us to live more consciously and maintain homeostasis. However, Manager parts may have taken on beliefs, habits, and rules (laws and commandments) from previous experiences or from the wider cultural context, such as family and religion. In time, some beliefs, habits, and rules may cease to be relevant or helpful and need to be replaced. Under stress, Managers may also take on extreme roles such as being overly controlling, overly care-taking, overly self-criticizing, and expressing extreme denial. They may take over the internal system as they try to keep Exiles from expressing suppressed feelings, lest the internal system become overwhelmed and out of control.

'Exiles' are emotions and feelings that function as protectors, because they let us know that something is wrong. Exiles are usually shaped by painful interactions in the external world. Examples are pain, fear, shame, grief, feelings of not being good enough, and hopelessness. Despite the efforts of Managers to keep them from being experienced ('in the closet'), Exiles can be activated by some situations and act out in extreme ways in an effort to be recognized and cared for, like many who have been oppressed, imprisoned, or marginalized.

'Firefighters' function as protectors on a daily 'stand-by' basis, in case a response is needed to extinguish extreme feelings and shut down extreme behaviors of Exiles. These protectors have evolved to respond to extreme stress by using various forms of distraction and numbing, such as extremes of working, eating, drinking, sleeping, shopping, and exercising. In moderation, these can be helpful. We all have our Firefighters! However, in their most extreme forms, they react suddenly and impulsively and can be very destructive to the person and to the outside world. Examples are violence, murder, and suicide.

Work in an IFS Session

In order to do inner work with parts, a typical IFS session includes a process similar to that used in many forms of meditation, first focusing on breathing until the person feels a sense of calm, compassion, and curiosity. It differs from many processes of meditation in that all sensations, feelings, and thoughts are acknowledged. If they do not move away on their own, the therapist guides the client to ask them to 'step aside,' with the promise that they will be attended to later. Once the state of 'Self' is reached, a person can be guided by the therapist to relate to and work with inner parts.

A client chooses what concern she or he wants to work on. The process starts with guiding the client's Self to identify the parts that are protecting and controlling exiles, acknowledging their concerns and the reasons they have taken on extreme protector roles. The Self then asks extreme protector parts (Managers and Firefighters) to 'step aside,' and continues to work with them until they are able to do so. Then the client accesses exiles to form a supportive relationship, listens to their 'stories,' and learns from them what they need for healing. There are many ways that healing takes place, because each person engages in the process in a way that he or she chooses. 'Burdens' carried by parts from earlier experiences, or by 'legacy' (family or culture) can be removed and replaced with desirable qualities that have been blocked. Manager and Firefighter parts that have stepped aside can then be restored to helpful non-extreme roles. This process is complex and cannot be reduced to a single linear path, because it varies with the person's experiences, needs, and choices. The therapist acts as an overall guide, but the process is chosen and guided by the client in Self-Leadership.

For the best outcome of this process, it is important that the therapist be in Self and return to the state of Self as soon as possible when their own parts are triggered by something that happens in the session. The client can sense the difference when the therapist is not centered in Self and fully present. This is important in the effectiveness of all approaches to psychotherapy.

Shaping Emotions That Shape the World

That IFS therapy affects one's emotions positively is reflected in the ways they 'shape the world,' as evidenced by changed lives. I (Davis) will give four examples from my experience of over 21 years of working with clients.

Donna

Donna had been sexually abused by an uncle when she was a young child. When she tried to tell her mother what kept happening to her, her mother had dismissed her story and her feelings. In order to continue to function, Donna had suppressed her feelings. As an adult, she had a very distant and conflicted relationship with her mother.

In therapy, she had been able to access the state of Self Leadership. In this state, she had worked with the Manager and Firefighter parts that had been protecting her from experiencing her feelings. She had accessed and worked with the abused child part in a compassionate way, had listened to its story and was able to learn from it what it needed from her for healing.

Several months after she ended therapy, Donna called me and said that she wanted to invite her mother to attend a session with her, so she could let her mother know how she had been affected. In this session her mother told her that she herself had been sexually abused as a child, by her father. Hearing the story of similar abuse from her young daughter had been so overwhelming that the mother had gone into extreme denial at that time, both of her own triggered emotions and those of her child. In the session she expressed regret to her daughter for what had happened. Donna later called to let me know that her relationship with her mother had changed for the good.

Susan

Susan came for counseling because she was aware that a nagging anxiety was interfering with her life, including her vocation that involved working closely with people who were ill. She could not identify anything in her life that might have caused this anxiety. From a state of Self Leadership, working with her parts helped her to recall that that there had been an underlying atmosphere of anxiety in her home when she was growing up, and also in the home of her maternal grandparents. That sounded to me like a 'legacy burden' that had been passed on to her from her family.

Then Susan recalled that she had visited a castle in Europe where an ancestor had survived a battle in which most of his fellow defenders had died. She knew this history because on a trip to Europe a few years before, her parents had told her to look for the plaque on the wall inside the castle that listed the few survivors. She had found and read it, as well as the names of all those who had not survived. Now, in therapy, she could imagine the trauma and anxiety that must have affected her ancestor's life after seeing most of his compatriots killed, and came to believe that it had been passed unconsciously down to her grandparents, parents, and herself.

I then asked Susan whether and how she would like to give up this legacy burden. She decided to take it back in her imagination through her parents and other ancestors and bury it in the earth near a stream outside the castle. Clients often choose earth, air, fire, or water as all have transformative qualities. Then Susan chose to bring in the qualities that had been blocked out or were now needed.

One of the last times I saw Susan was the morning of 11 September 2001, when little was yet known of what had happened. Rather than doing therapy, we sat together in mourning and not-knowing, as we did deep breathing to bring us into Self. When her appointment was over, she was headed for work, where she would interact with people all day who would be in shock and affected in many ways by the incoming news.

Rachel

Rachel had been in therapy with many different therapists for many years, and her last therapist had moved away. She had been dissociative most of her life. She spoke of herself as 'We.' While Rachel would be labeled by the medical field as having 'dissociative identity disorder' or 'multiple personality disorder,' her condition fit with the assumptions of the IFS approach and attitude that 'All parts are welcome.'

Once she felt comfortable with me, she would come into my office and immediately start to talk like a toddler, get onto the floor, and re-enact the sexual abuse she had experienced as a small child in a cellar. Sometimes healing takes place automatically when a person chooses to tell the story or re-enact a trauma, but repeatedly re-enacting and experiencing a trauma is re-traumatizing. After other efforts, I asked Rachel if I could, in our imaginations, go into the cellar, take her hand, and lead her to a safe place of her choosing, so she would never have to go there again. She gave her consent, and with further work she chose to give up the fear and pain associated with the experience to a cloud. She then chose to bring in qualities associated with play, which she missed in her childhood. When she ended therapy, Rachel moved to another part of the United States to 'start over' with her life and relationships.

Nadia

Nadia had come to the United States from a country in South Asia where arranged marriage was part of the culture. He husband struck her on their wedding night, to make it clear to her that he was the one in charge, and that if she didn't obey him, there would be consequences. The next day she told her mother that she did not want to stay married to him. Her mother's response was that if she left her marriage it would bring shame to her family, she would be marginalized and never again be able to marry.

When I saw her, she had two sons and had seen signs that her husband was passing on his cultural view of the roles of men and women. She had experienced a different cultural view in the United States and was determined that her sons, one of whom was in his teens, would not take on the attitude of their father. This is an example of a 'legacy burden' which is passed on in a particular cultural context. Nadia had replaced her earlier belief of the necessary submission of women and wanted to stop this cultural belief from passing on to the next generation and generations after that. In therapy she had learned how to be in Self-leadership and respond to threats with calm and creativity. She had reclaimed her value as a woman. Nadia chose not to leave her husband because she wanted to maintain a consistent influence on the lives of her sons.

In my years at a non-profit pastoral counseling center, I saw male and female clients who were in many different vocations including those of teacher, doctor, nurse, social worker, grocery store cashier, minister, hospital chaplain, house cleaner, parent, newspaper reporter, and department store salesperson. All were embedded in a work environment in which they had influence on the lives of others, who would have influence on yet many others. I am hopeful that their being able to access Self Leadership would continue to have a positive effect on their ability to shape the world in a positive way.

In addition to evidence from individual cases of how shaping emotions shapes the world, studies are now being conducted to provide scientific evidence of the impact of IFS on emotions that changes lives. One such statistically controlled study on people with rheumatoid arthritis shows that IFS-based practice reduced pain and depressive symptoms, while improving physical function and self-compassion, and that there was continuation of a reduction in depression a year later (Shadick et al. 2013).

Conclusion

The world shapes human emotions (neural action programs) that are internally experienced as feelings. Through evolutionary processes an individual's genetic makeup and brain are shaped. As individual humans develop, their emotions are also shaped by life experiences in families and cultures – especially in the earliest years – so that each person's social brain network is different from that of others'. In turn, we can work with our inner experiences of emotions – our feelings – which then can affect our emotions and their expressed behaviors. Religious practices of prayer and meditation can help develop mindfulness and compassion, and the Internal Family Systems model can provide a guide for working with emotions from a centered state. By working on feelings, our emotions and resulting behaviors can be shaped to make a better world.

Appendix



Fig. 4.1 The internal system (Mullen 2001–2002) Text adapted from Richard C. Schwartz, *Internal Family Systems Theory* (1995): graphic by Janet R. Mullen

Bibliography

- Abbott, A. (2007, December 12). Abnormal neuroscience: Scanning psychopaths. *Nature*, *450*, 942–944. doi:10.1038/450942a. Published online. Accessed 9 Sept 2014.
- Babiak, P., & Hare, R. D. (2009). *Snakes in suits: When psychopaths go to work*. New York: HarperCollins. Kindle Edition.
- Borg, M. J. (2003). The heart of Christianity: Rediscovering a life of faith. San Francisco: HarperSanFrancisco.

- Damasio, A., & Carvalho, G. B. (2013, January). The nature of feelings: Evolutionary and neurobiological origins. *Nature Reviews/Neuroscience*, 14, 143–152. http://www.nature.com/ search?q=Damasio&q_match=all&sp-m=0&year_range=2013. Accessed 12 Sept 2014.
- Desbordes, G. et al. (2012). Effects of mindful-attention and compassion meditation training on Amygdala response to emotional stimuli in an ordinary, non-meditative state. *Frontiers in Human Neuroscience*, 6. doi:10.3389/fnhum.2012.00292. Accessed 10 Sept 2014.
- Hanh, T. N. (1997). Living Buddha, living Christ. New York: Penguin Putnam.
- Hare, R. D. (1999). Without conscience: The disturbing world of the psychopath among us. New York: The Guildford Press.
- Hunter, P. (2010, September). The Psycho Gene. *EMBO Reports* (The European Molecular Biology Organization), *11/9*, 667–669.
- Keating, T. (2002 (1986)). Open mind, open heart. In: T. Keating (Ed.), *Foundations for centering prayer and the Christian contemplative life*. New York: Continuum.
- Keysers, C. (2011). The empathic brain. Amsterdam: Social Brain Press.
- Lemberg, M. R. (1979). The complementarity of religion and science: A trialogue. *Zygon: Journal of Religion and Science*, 14, 14–30.
- Meffert, H., Gazzola, V., den Boer, J. A, Bartels, A. A. J., & Keysers, C. (2013, August). Reduced spontaneous but relatively normal deliberate vicarious representations in psychopathy. *Brain*, 136/8, 2550–2562.
- Merton, T. (1971). Contemplative prayer. New York: Image Books.
- Motzkin, J. C., Newman, J. P., Kiehls, K. A., & Koenigs, M. (2011, November 30). Reduced prefrontal connectivity in psychopathy. *The Journal of Neuroscience*, 31/48, 17348–17357.
- National Scientific Council on the Developing Child. (2005/2014). *Excessive stress disrupts the architecture of the developing brain* (Working Paper 3), Updated Edition. www.developing-child.harvard.edu. Accessed 3 May 2015.
- Peters, K. E. (2002). *Dancing with the sacred: Evolution, ecology, and god*. Harrisburg: Trinity Press International.
- Schwartz, R. C. (1995). Internal family systems therapy. New York: Guilford.
- Schwartz, R. C. (2001). *Introduction to the internal family systems model*. Oak Park: Center for Self Leadership.
- Schwartz, R. C. (2013a). Evolution of the internal family systems model. Oak Park: Center for Self Leadership. http://www.selfleadership.org/about-internal-family-systems.html. Accessed 13 Sept 2014.
- Schwartz, R. C. (2013b). *The larger self*. Oak Park: Center for Self Leadership. http://www.self-leadership.org/the-larger-self.html. Accessed 13 Sept 2014.
- Schwartz, R. C. (2013c). The therapist-client relationship and the transformative power of self. In M. Sweezy & E. L. Ziskind (Eds.), *Internal family systems therapy: New dimensions* (pp. 1–23). New York: Routledge.
- Shadick, N. A. et al. (2013, June). A randomized controlled trial of an internal family systemsbased psychotherapeutic intervention on outcomes in rheumatoid arthritis: A proof-of-concept study. *The Journal of Rheumatology*, 40, 11. http://www.jrheum.org/content/early/2013/08/10/ jrheum.121465. Accessed 11 Mar 2014.
- Shoemaker, W. J. (2012, December). The social brain network and human moral behavior. Zygon: Journal of Religion and Science, 47/4, 806–820.
- Shoemaker, W. J. (2014). Limbic emotions, moral emotions and the social brain network. Paper presented at "Do Emotions Shape the World? Perspectives from Science and Theology." The 15th European Conference on Science and Theology, Assisi, Italy. Apr 30-May 4.
- Shouten, R. (2012, March). Psychopaths on Wall Street. Harvard Business Review 14.
- Singer, T. (2006). The neuronal basis and ontogeny of empathy and mind reading: Review of the literature and implications for future research. *Neuro-science, Biobehavior Review, 30*, 855–863.
- Ware, K. (2000). The inner kingdom. New York: St. Vladimir's Seminary Press.

Marjorie Hall Davis (M.S. Cornell University in neurology, M.Div. Yale Divinity School) has been interim minister in several congregations of the United Church of Christ, a Pastoral Counselor for 21 years, and is a Fellow of the American Association of Pastoral Counselors. She has used the Internal Family Systems approach extensively in her counseling. She is author of 'Structures of Evil Encountered in Pastoral Counseling,' *Zygon* (September 2008) and co-author with Karl Peters of 'Are Religious Experiences Natural? Biological Capacities for Religion,' In *Is Religion Natural?* (T&T Clark).

Karl E. Peters (M. Div. McCormick Theological Seminary, Ph.D. Columbia University in philosophy of religion) is Professor Emeritus of Philosophy and Religion, Rollins College, where he taught world religions, and religion and science. He has been editor and co-editor of *Zygon*, and is currently co-chair of the Journals Publication Board. Karl has written *Dancing with the Sacred: Evolution, Ecology and God* (Trinity Press 2002) and *Spiritual Transformations: Science, Religion, and Human Becoming* (Fortress Press 2006).

Chapter 5 Smile and Lie? Why We Are Able to Distinguish False Smiles from Genuine Ones

Maria - Magdalena Weker

Abstract Facial expressions are movements of the face muscles which allow people to express thoughts, emotions, feelings, moods and attitudes towards other people and situations. In the process of social development people learn how to control their facial expressions. Therefore, certain emotions can be faked. Studies on the possibility of faking facial expressions, and on the technique of controlling facial muscles, are of utmost interest to the representatives of numerous professions, such as actors, politicians, TV presenters, etc. A smile is a facial expression formed by flexing the muscles mainly near both ends of the mouth, the cheeks and the eves. Laughter is an expression of joy or happiness, but may also be an uncontrolled expression of fear. A smiling face grabs our attention faster, stays in our memory longer and evokes positive associations more quickly. Today this phenomenon is widely used in advertising, marketing, politics, acting, etc. A smile is a message to others. The correct reading of its meaning seems to guarantee that contact is established appropriately. A natural, childlike smile evokes positive emotions, since the audience perceives it as a genuine, direct and not distorted message. Laughter occurring in situations in which the audience also participates seems genuine as well. If the audience understands the situation and its context, they treat the smile as genuine. Therefore, they can relate to the message and perceive it as genuine. In the absence of such relation, the message of a smile causes consternation and discord. The effect may be accidental, but it sometimes seems to be intended by the author, since inner anxiety compels the audience to continue their analyses and deliberations. Truth and lies hidden behind the grimaces and smiles of persons pave the way for getting to know oneself and understanding the world.

Keywords Facial expressions • Fake smile • Genuine smile • Theology of joy • Joy

M.-M. Weker (🖂)

University of Cardinal Stefan Wyszyński, Warsaw, Poland e-mail: m.weker@uksw.edu.pl; mariaweker@gmail.com

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_5

Introduction

The ability to use facial expressions is a late evolutionary development. It seems that making a specific facial expression to evoke a specific impression has been observed only in vertebrates. The purpose of such expressions it most often to intimidate, or to discourage a rival from aggressive behaviour. From the point of view of ethology, it is interesting that facial expressions are often used to convey messages between species.

However, it is only in *Hominidae* that facial expressions were used not only to convey a specific social message, but also to falsify the message by employing various grimaces. This ability is dangerous, since it conceals the true intentions of the author of the message and exposes the recipient to the consequences of its erroneous interpretation. However, it seems that people have an innate ability to distinguish fake facial expressions from genuine ones. The phenomenon has been studied for many years by numerous research centres around the world.¹ However, very little research has been undertaken into 'why we are able to distinguish a false facial expression from a genuine one'. Leaving aside the issues related to the correctness of the distinction, which has been the subject of numerous interesting studies, I will attempt to identify the sources of this ability. It seems that it is related not only to phylogenetic behaviour, but also results from characteristic features of our spiritual and corporeal structure.

In this article, I will analyse the above hypothesis with regard to false smiles and I will try to prove that the ability in question may be related to the human ability to experience higher emotions.

What Is a Smile?

In 1862, in his book entitled 'Mechanisme de la Physionomie Humaine', Guillaume Duchenne de Boulogne presented his studies on human facial expressions. He stimulated specific facial muscles using electric impulses to see how the facial expressions changed. He documented the changes with photographs. The combination of those two techniques, i.e. electric stimulation and photographic documentation of the effects, allowed detailed analysis of individual human facial expressions for the first time in the history of science. It enabled Duchenne to identify, *inter alia*, the muscles controlled by human will. Such control allows us to manage our facial expressions and thus to obtain the facial expression we want at a specific moment in time. However, many facial expressions are produced by muscles which we cannot control. Most of them are grimaces generated spontaneously and occurring in

¹The BBC website offers a possibility to test the ability to spot the difference between a fake smile and a real one (http://www.bbc.co.uk/science/humanbody/mind/surveys/smiles/index.shtml).

specific situations. They appear naturally and effortlessly. Their characteristic feature is the impossibility of producing them in a controlled way (Duchenne 1990 (1862)).

The smile was one of the facial expressions analysed in most detailed by Duchenne. He distinguished several types of smiles, of which the most natural one has later been called a 'Duchenne smile'. A Duchenne smile is considered to be a spontaneous facial reaction occurring at a moment of joy, satisfaction and happiness. Duchenne noted that the facial expression accompanying those emotional states is produced by a group of muscles which are not subject to wilful control. Therefore, it can be described as a genuine smile, contrary to those generated smiles which are also called fake smiles.

Much research has been carried out since the pioneering experiments of Duchenne in order to investigate the differences between facial expressions that are 'genuine' and natural and those obtained in a controlled way. Smiling has been the subject of special attention from numerous researchers from many fields of science, ranging from biochemistry and physiology to psychology and cognitive science.

Every human being has muscles which can produce various facial expressions. The research carried out over the last 200 years has shown that the nature of those expressions and the related emotional messages are universal.

The study by Ekman et al. on facial expressions, conducted in the 1970s, resulted in the creation of the FACS (Facial Action Coding System), which permitted the description of the majority of facial expressions observed in humans (Ekman and Freisen 1982: 241–242). The description of facial behaviour in this system is based on specific aspects – classification according to 44 anatomically separate action units, intensity, laterality, location (in time), timing. It allows for a thorough analysis of facial behaviour and then linking it to the conveyed information. Based on the studies carried out using the above scale, Ekman et al. defined over 3000 facial expressions, including smiles, which can be observed in various situations. They managed to identify the group of muscles active in specific smiles. The researchers were particularly interested in the differences between felt and false smiles. They described the differences between those smiles in terms of tension and involvement of individual facial muscles, timing in a specific situation (too early or too late), asymmetry of the two sides of the face, duration and other factors. Their analyses led to their distinguishing yet another type of smile, i.e. the 'miserable smile', which performs the socially important task of maintaining interpersonal contact (Ekman and Freisen 1982: 242-249).

In studies carried out with Richard Davidson from the University of Wisconsin, Paul Ekman and Wallace Friesen confirmed the unique relation between positive emotions and a Duchenne smile. Using the FACS, they described the reactions of volunteers to various incentives and found that this smile was clearly correlated with the feeling of pleasure. They found that such smiles produced greater activity in the brain's left anterior temporal region, an area associated with experiencing positive affect, and increased activity in the left parietal region related to verbal activity. Summing up their analyses, the researchers concluded that a Duchenne smile was clearly a better sign of enjoyment than other kinds of smiles (Ekman 2006 (2001); Szarota 2006; Jaffe 2010).

The Origins of Smiling

It was Charles Darwin who argued that there was a group of basic facial expressions signifying emotions. This has been proved, *inter alia*, by studies conducted by I. Eibl-Eibesfeldt, P. Ekman, and J. Van Hooff (Caron 2002: 249). In his studies, Paul Ekman has demonstrated that the said group included six basic emotions, namely happiness, sadness, anger, fear, disgust and surprise. They are portrayed by facial expressions which are similar in all people, regardless of their place of origin, language or growing up in less or more industrialised regions of the world (Ekman 1973: 220).

One of the main questions asked by researchers of the smile is the question about the origins of smiling. Two main hypotheses may be identified here. The first one claims that the smile is a transformed grimace observed in animals, while the other argues that facial expressions are the result of socio-biological evolution of human beings.

Some ethological studies demonstrate that grimaces similar to smiles may be observed in some monkeys and apes (Caron 2002: 250). Similar grimaces may also be found in other mammals, e.g. predators, but in their case they involve baring of teeth which is rather a warning to be careful (Chmurzyński and Weker 2011: 33). It is possible that a human smile evolved from such teeth baring.

Smiling and laughter are studied in ethology, since it is important to know whether such behaviour is typical only for human beings. The observation of nonhuman primates in the 1970s found behaviour similar to smiling and laughter. Primates display 'silent bared-teeth', which probably are a ritualised form of aggressive behaviour and aim at appeasing the potential adversary (Chmurzyński and Weker 2011: 35). The bared-teeth display may also be produced in the context of social hierarchy, to reinforce attachment or acknowledge the dominance of specific individuals. Another facial expression observed in primates is the 'relaxed openmouth', which is similar to facial expressions of humans during smiling, and vocalisations similar to human laughter. These vocalisations occurred during the play of chimpanzees (studies by Jane Goodall (1997 (1990))), gorillas (studies by D. Fosesey (1983)) and orangutans (studies by Chevalier-Skolnikoff (1973)).

The second hypothesis concerns the use of facial expressions in social contacts. The first studies on facial expressions showed that smiling was most often interpreted as an expression of happiness and gladness. Research carried out in the 1990s has shown that a smile is a facial expression that can vary significantly, e.g. it may be a sign of joy or not be related to joy in any way (Frank 1993: 12). However, all respondents have a similar ability to recognise genuine smiles and spontaneous laughter as an expression of happiness and joy.

Research on smiling points to its universal nature (Caron 2002: 250). All people have the muscles and respiratory system that allow for the generation of specific facial expressions and making sounds called laughter. All people, regardless of their culture, possess in their repertoire of behaviour the use of laughter. According to Caron (2002: 248–251), ethnographic studies have not found a culture in which

humans do not laugh, although behaviour related to manifesting joy may vary considerably.

The situation is similar when it comes to smiling. All people have the muscles with which to make facial expressions and smile. Such a facial expression (smile) is usually interpreted as the manifestation of joy and happiness. Research by Ekman allowed the determination of six types of emotions appearing on a face which, regardless of culture and language, are treated as manifestations of specific emotions, i.e. happiness, sadness, anger, fear, disgust, and surprise (Ekman 1973: 220).

Hypotheses concerning the universal nature of smiling were confirmed in a cross-cultural study which found that smiles had phylogenetic origins. At the same time, the effects of smiling on the physical and mental state of humans and its role in the field of psychoneuroimmunology seem to confirm the hypothesis about smiling being an adaptive behaviour. Caron points out that these conclusions should be understood in evolutionary terms: individual ancestors who could produce the facial expression recognized by everyone as a smile, as well as the rhythmic vocalization known as laughter, possessed an adaptive advantage because smiling and laughing enhance survival for human beings (Caron 2002: 249).

In his essay Caron defined four rules which seem to explain why humans are able to laugh and smile. First, a smile can signal joy or happiness, but may also be used for socio-cognitive manipulation and be an indicator of aesthetic impressions. What we like and find pleasant elicits joy and a smile. Looking at it from the reverse, what elicits joy is liked. Therefore, it is sufficient to amuse someone to obtain their support and interest in a person or an object. Thus, laughing and smiling can be considered uniquely human behaviours (Caron 2002: 274).

Second, since smiles and laughter occur also in transitional or ambiguous situations (e.g. close approaches of strangers, confrontations with strangers), it may be assumed that they are a kind of subthreshold reaction to protect us against a potential threat by sending neutral signals. The reaction only occurs with liminality and thus 'laughter always signifies liminality' (Caron 2002: 274).

Third, laughter and smiling function as a form of social control by soothing and warming up various forms of social contact. They allow us to convey information in a way that is better perceived by the recipient (Caron 2002: 274).

Fourth, studies point to the association of laughter with play, and thus with the cognitive functioning characteristic of humans. Moreover, recent studies emphasize the link between smiling and laughter and the development of spoken language (Caron 2002: 274).

Fifth, laughter and smiles counterbalance the seriousness and the established social, economic and moral order, etc., acting as a safety valve for social norms (Caron 2002: 274).

Research on mirror neurons must also be taken into account in the context of reading human facial expressions. The study by R. P. Hobson from University College, London, on autistic children showed that the nature of their deficits was emotional and not cognitive. The children were asked to sort out portraits. The persons on the portraits made various facial expressions and wore various headgear. The children from the control group sorted the pictures according to facial expressions

they saw on the pictures. The autistic children sorted the pictures according to headgear. The results, interpreted in the light of current knowledge on mirror neurons, show that the reading of emotions is closely related to the recipient's ability to mimic the displayed facial expression. This may suggest that facial expressions are related to activity of our brain which during phylogenesis obtained the ability to understand non-verbal messages (Jacoboni 2008).

Genuine Smiling vs. False Smiling

According to researchers, smiling performs a social and emotional role. It shapes and affects social relationships. The studies by R. Provine have shown that a smile is a form of establishing and maintaining social contact and also often a kind of mask to express a specific attitude (Provine 1996). They have also demonstrated that a smile has a simple and clear structure which enables its fast and correct recognition. S. Cardoso emphasizes that smiling is an innate ability, as evidenced by smiles and loud, spontaneous laughter of children who were born deafblind (Cardoso 2001: 3).

It is also interesting that a smile is not only a social communication from the sender to the recipient(s), but also generates feedback. Smiling, similarly to laughing, has an impact on the entire body and almost all its systems. It stimulates the activity of the cardiovascular system and results in changes to the immune and endocrine systems (Rojek 2003: 239–240). A positive impact of smiling on wellbeing and mood has been observed, as well as its contribution to increasing the ability to cope with stress or even a change in the pain tolerance threshold. An act of smiling results in the body and mind being in a state similar to sound sleep. It is interesting that the smile affects not only the body of the smiling person, but works also when others smile at someone. However, for the effect of smiling to be real, the smile must be genuine and natural. This is why people often feel happier around children, since children smile more frequently than adults. Children smile approximately 400 times a day, while adults in a particularly good mood smile 40–50 times at most. The majority of adults normally smile only around 20 times a day (Rojek 2003: 237–238).

In the 1970s Paul Ekman, along with other researchers, popularised a biological model for the expression of emotions, according to which human facial behaviour is universal and at the same time culture-specific (Ekman 1973). It evolved from biological behaviour as involuntary facial expressions evoked by felt emotions. Therefore, it is universal and common for all people. At the same time, it depends on the socio-cultural context in which a given person functions. Children are taught to control their facial expressions, while society requires adults to control their facial behaviour. However, despite many efforts, it is often the facial expression that makes it difficult or even impossible to perceive the information in line with the intention of the sender. Body language acts similarly and often completely alters or reveals concealed messages. It is particularly visible in patients with mental disor-
ders or neurological defects who interpret various messages differently, depending on the method of their display (cf. Sacks 2008 (1985)). However, the ability to control facial expressions is of the utmost importance in professions where it is undesirable to reveal true emotions. Such professions include all forms of work with people where direct contact is crucial. There are also professions where the ability to produce a specific facial expression generates an increase in effectiveness. The control of facial expressions is absolutely necessary in the acting profession, photo modelling, PR, public presentations, etc. However, leaving aside the situations where a composed and controlled facial expression is a professional necessity, numerous researchers were interested in the human inclination to falsify facial expressions with regard to felt emotions.

Research on smiling has focused on such issues as differences in the form of smile depending on the origin and affiliation with a specific cultural group, race, upbringing, age, etc. Researchers have tried to find out whether smiling depends on environmental factors or whether it is a universal emotional symbol common for all *Homo sapiens*. They have tried to establish whether the emotional state of the research subjects could be determined based on facial expressions. They have also tried to find a correlation between the attitude to a specific task and the facial expressions this task produced (Landis 1924). It was established quite early that specific facial expressions do not necessarily corresponded to actual emotional states (Ekman et al. 1990). This made the analysis of the ability to distinguish between various kinds of smiles even more difficult.

Researchers identified over 50 types of smile, from a triumphant smile to a smile full of bitterness. The Duchenne smile is considered to be the most genuine one. It involves two groups of muscles, *zygomaticus major* controlling the corners of the mouth, and *occuli obicularis* around the eye socket.

Although false smiles often look similar to genuine ones, they are actually slightly different. This is due to the fact that they are generated by different muscles, controlled by different parts of the brain. False smiles may be generated at any time, since the signals stimulating *zygomaticus major*, i.e. the main muscles of cheeks to react, are generated at will. As a result, the corners of the mouth are raised, but other muscles do not change their position. A genuine smile is generated unconsciously. Studies on smiling show that the signals generated by pleasant feelings or thoughts stimulate the parts of the brain responsible for emotions. As a result, a larger group of cheek muscles is stimulated (*oculi orbicularis* and *pars orbitalis*). Therefore, in the case of a genuine smile, the eyebrows and the corners of the eyes are also slightly raised, and creases around the eyes are often formed.

Lines around the eyes and raised cheeks can sometimes also appear in fake smiles making them look genuine. It is often the result of appropriate training of facial muscles and is used by persons using their social image as a means of earning a living or as a basis for social relationships. According to Paul Ekman (2006 (2001)), the purpose of a fake smile is to convince another person that a positive emotion is experienced, which is untrue. The person in question may not feel any-thing or may feel negative emotions which he or she is trying to conceal using a

false smile as a mask. A fake smile involves only one muscle: *zygomaticus major*, which is controlled by our will.

However, Paul Ekman clearly states that there are a few key signs that distinguish these smiles from real ones. For example, when a smile is genuine, the eye cover fold – the fleshy part of the eye between the eyebrow and the eyelid – moves downwards and the end of the eyebrows dip slightly. Scientists distinguish between genuine and fake smiles by using a coding system called the Facial Action Coding System (FACS), which was devised by Professor Paul Ekman of the University of California and Dr Wallace V. Friesen of the University of Kentucky (Ekman and Freisen 1982: 241–248; Ekman 2006 (2001)).

Paula M. Niedenthal is of a similar opinion. According to her, the human brain is able to distinguish genuine smiles from fake ones. It is because the brain of the observer assesses the geometry of the face of the smiling person and compares it to the smile 'model'. Furthermore, it may also assess the situation which generated the smiling and verify whether the smile is an adequate reaction. However, our automatic reaction is the most important. Our facial expression becomes similar (mirrors) the observed facial expression, and if the areas of the brains active in the case of genuine smiling are stimulated, we consider the smile of the sender to be such (Iacoboni 2008).

Studies on the ability to correctly interpret human facial expressions are conducted in numerous fields of research. The results are of interest to designers of smile recognition software used in audiovisual equipment, as well as to neurologists or neuropsychologists. They are particularly interested in changes in the ability to identify facial expressions or the limited ability to use facial expressions that are characteristic of some disorders of the nervous system or disorders caused by brain damage. The reduced ability to use facial expressions occurs *inter alia* in Parkinson's disease and Moebius syndrome. Inability to understand or identify and express emotions occurs also in alexithymia and autism. In aphasia, the ability to interpret facial expressions is unrelated to the accompanying verbal communications (Sacks 2008: 130–150).

In the meta-analysis of research on smiles, Ekman noted that studies conducted in the twentieth century seldom analysed the most important feature of natural facial behaviour in the opinion of Duchenne (Ekman and Friesen 1982). Only the studies in ethology paid marginal attention to spontaneous and deliberately generated smiles. According to Ekman, this could be one of the reasons for the failure of studies on facial expressions. Therefore, together with Freisen and others (Ekman and Friesen 1982; Ekman et al. 1988) he suggested distinguishing 'enjoyment smiles'. These 'enjoyment smiles' are smiles that occur spontaneously, involuntarily. This allows us to define types of smiles not only in terms of active facial muscles, but also in relation to movement or smile duration. According to the researchers, such smiles can be distinguished from other types of smiles, such as 'false smiles,' which are made deliberately to convince another that enjoyment is occurring when it is not; 'masking smiles,' which are made deliberately to conceal the experience of negative emotions; and 'miserable smiles,' which acknowledge a willingness to endure an unpleasant circumstance (Ekman et al. 1990: 343). In their subsequent studies, they described 14 other types of smiles (Ekman et al. 1985). It is currently commonly believed that there are several tens of types of smiles.

Research conducted over many years reveals various correlations between the type of smile and its social effects. Smiling significantly improves the effectiveness of interpersonal contacts. Therefore, smiles are necessary in numerous situations, in particular when the circumstances are not conducive to feeling natural joy, e.g. in stressful moments, in business contacts, promotional campaigns, etc. In such situations, a genuine smile is often replaced by a false smile.

Numerous studies have been performed to prove the relationship between the ability to smile naturally and quality of life. Psychologists Dacher Keltner and Lee Anne Harker of the University of California at Berkley studied 141 high school senior-class photos from the 1960 yearbook of Mills College (Harker and Keltner 2001). All people were contacted at age 27, 43 and 52 and asked about the status of their marriage and life satisfaction. The women with Duchenne smile were more likely to be married and stay married. They were also more likely to experience a greater sense of personal well-being. These results were found to be consistent in a 30-year follow up. Researchers also found that good looks had no relationship with marital status or life satisfaction. A related study, published in a 2009, confirmed a correlation between low-intensity smiles in youth and divorce later in life (Jaffe 2010).

Many studies also analysed whether people smile differently when they lie and when they tell the truth. They showed that differences did not concern the frequency of smiles, but that the smile itself is different in shape and form in those two situations (Ekman 2006 (2001); Szarota 2006). The differences are thus qualitative, not quantitative.

Many of the abovementioned studies argue that we have the ability to distinguish genuine smiles from false ones. The important role of smiling in social life makes smiles valuable facial expressions. Social and economic benefits generated by smiles are so extensive that false smiles are socially accepted. Moreover, the ability to manipulate one's facial expressions is considered to be a valuable skill and, therefore, children are taught to fake and mask genuine emotions. An interesting aspect is also that often attention is paid to masking spontaneous joyful emotions, i.e. replacing genuine smiles with controlled smiles (for example, during public presentations).

It seems that in everyday life, with omnipresent smiles on advertising posters, in commercials, films, works of art, faces of customer service employees or customers, etc., people should react positively to those signals. However, such smiles rarely evoke the expected reaction. Few people smile upon seeing a smiling model on billboards or in commercials. And few people smile spontaneously in reaction to the professional smiles of public administration officials or flight attendants. Their reactions are mostly forced, thus reflecting the most characteristic feature of false smiles, i.e. their artificiality.

The ability to distinguish a false smile from a genuine one is an intriguing quality. Not all people realise that they have it; it seems that in some the ability may be subconscious. Therefore, it is worth taking a look at the possible sources of this ability.

Hypotheses Concerning the Ability to Distinguish Genuine Smiles from False Smiles

Hypotheses concerning the ability to distinguish genuine smiles from false smiles may be divided into three types which may be called anthropogenetic, ethological and spiritual.

First, this ability may be anthropogenetic. The analysis of the origins of humans show that the construction of the human body required the involvement of the community in issues related to survival, from the time of the first Hominids. Human beings are social creatures, dependent on others at the beginning and the end of their lives, during illness or reproduction, etc. Therefore, humans had to develop a method of conveying specific messages concerning, for example, refraining from aggression towards the members of the same social group. From the biological point of view, the chances of survival were higher for those who were able to convey signals with a positive message. However, the ability to correctly read the messages was also necessary. An interpretation error could eliminate the individuals without this ability from the gene pool. Therefore, the ability to distinguish genuine facial expressions from false ones may have a phylogenetic basis. Research on mirror neurons shows that the ability to recognise and distinguish genuine facial expressions from false ones may be related to the correct reading of the emotions of other persons. The correct reading allows for appropriate behaviour towards others and thus results in a better social life, which could be of great importance in primitive cultures (Iacoboni 2008).

According to the second hypothesis, the ability to distinguish true messages from false ones may be ethological. The analysis of the methods of conveying various images by animals revealed remarkable situations from the human point of view, when the messages conveyed by animals are faked. Examples include the sounds signifying an approaching enemy (e.g. hawk or snake) made by birds to frighten away the rivals for food (Chmurzyński and Weker 2011). In such situations, the ability to recognise whether the message is true or false is of the utmost importance. The price for wrong interpretation may be very high. Therefore, if smiles originated as facial expressions observed in particular in non-human primates, we may assume that facial expressions were sometimes abused to achieve specific goals. The ability to distinguish genuine expressions from false ones could be the response to such abuses. The use of specific expressions by animals, which are mainly aimed at effortlessly frightening away rivals, may prove that the ability to distinguish genuine facial expressions from false ones guaranteed the correct recognition of the message. Therefore, it could ensure survival.

Both hypotheses seem to explain relatively well the origins of the ability to distinguish false smiles from genuine ones. They may both serve as a starting point for new investigations and an inspiration for research on human facial expressions. It seems, however, that these hypotheses do not fully explain the human ability to recognise truth and falsehood concealed in facial expressions. Therefore, another hypothesis on the said ability should be formulated. It is related to the characteristic which distinguishes humans from all other living creatures we know. It refers to the supranatural gift granted to human beings in their souls.

In the New Testament, there are three words denoting joy: *euphrosyne*, *euphraino*; chara, chairo; agalliasis, agalliaomai. The first means eschatological joy (e.g. in Ps 99: 11; 97: 1; Isa 65: 19). The second term, i.e. 'chara', is abundant in theological meaning. The third word denoting joy in the New Testament, i.e. 'agalliasis', reinforces the meaning of the noun 'chara'. The reinforcement consists in presenting the external expressions of joy. Speaking of Christians as 'joyful in hope' (Rom 12: 12), Saint Paul points to hope as a source of Christian joy and optimism. Therefore, he encourages Christians to always rejoice in the Lord (1 Thess 5: 16) as people expecting joy coming from God (Rom 15: 13). Saint Paul teaches (Ga 5: 22) that joy is the fruit of the Holy Spirit and lists it among other fruit of the Holy Spirit, which include love, peace, forbearance, kindness, goodness, faithfulness, gentleness and selfcontrol. The issue of joy has appeared in the writings of the Church fathers who used the following Latin terms: gaudium, laetitia, exsultatio. They make a clear distinction between earthly joys and eternal joy. Earthly joys are usually associated with sin. This leads to the conclusion that there is a sinful joy which has nothing to do with true joy. Sin is a cause of sadness, even if at first it gives pleasure. Therefore, what we call earthly joys should not be called joy, since only spiritual joy is a true joy. It can be achieved already in this life, although it will be full only in heaven. Therefore, Saint Augustine distinguishes incomplete joy from full joy within the term 'true joy'. He calls full joy a 'perfect joy', adding that it can be achieved only in heaven (Czesz 2004). Theology speaks of numerous types of joy. For example, Blessed Father Michał Sopoćko enumerates three kinds of joy: sensual joy, resulting from the possession of earthly goods; spiritual joy, resulting from the presence of beauty, truth, justice and rightfulness; and finally supernatural joy, which is infinitely more perfect and permanent, related to the presence of supernatural good. Sopoćko considered joy to be one of the most important needs: 'a necessary condition for the life of the body, the spirit and eternal life' (Steć 2003).

Laughter is most often an expression of joy and joy is the reason to laugh. Laughter is a human phenomenon and, according to Johannes B. Lotz SJ, a gift of God (Wolsza 2012). According to Sopoćko, smile is a consequence of internal joy (Steć 2003). Laughter occurs in many situations and acts as a 'safety valve'. It reduces stress, releases one from negative emotions, restores the right balance in one's attitude to life and creates necessary distance to various issues. It helps overcome barriers between people.

K. Wolsza emphasizes, however, that laughter, as any other gift, may be misused. Laughter which occurs in confrontation with a tragedy is indecent. Laughing on account of someone's failure is mockery. The laughter of a bitter human being may be sarcastic. Fake laughter is a kind of mask which is not grounded in the internal feeling of joy (Wolsza 2012).

Therefore, if a genuine smile is an expression of joy which is a supernatural gift, then the message encoded in the smile should be completely true. Such a message cannot be found in a fake smile. Therefore, it seems that the claim about the supernatural nature of the ability to distinguish between fake and genuine smile can be accepted. The above hypotheses are not disjunctive. It seems that they may complement and enrich one another. This approach allows for an exhaustive analysis of the problem which is the subject of this publication. Perhaps the search for an answer to why we are able to distinguish genuine smiles from false ones, even if we do so unconsciously, will enable us to reveal other secrets of human nature.

Bibliography

- BBC Spot The Fake Smile. http://www.bbc.co.uk/science/humanbody/mind/surveys/smiles/index. shtml. Accessed 3 Mar 2014.
- Cardoso, S. H. (2001). Our ancient laughing brain. http://www.cerebromente.org.br/n13/mente/ laughter/laughter1.html. Accessed 3 Mar 2014.
- Caron, J. E. (2002). From ethology to aesthetics: Evolution as a theoretical paradigm for research on laughter, humor, and other comic phenomena. *Humor*, 15–3(2002), 245–281.
- Chevalier-Skolnikoff, S. (1973). Facial expression of emotion in nonhuman primates. In P. Ekman (Ed.), Darwin and facial expression: A century of research in review (pp. 1–89). New York/ London: Academic Press, Inc.
- Chmurzyński, J. A., & Weker, M. M. (2011). Ceremonie w świecie zwierząt (Ceremonies in the animal world). *NURT SVD*, *2*, 29–42.
- Częsz, B. (2004). Teologiczne podstawy radości. ftp://v003961.home.net.pl/kongres_13-07_zalacznik1.pdf. Accessed 3 Mar 2014.
- Duchenne, G. (1990). *The mechanism of human facial expression* (R. A. Cuthbertson, Trans.). New York: Cambridge University Press. (Originally published in 1862 as *Mecanisme de la Physionomie Humaine*).
- Ekman, P. (1973). Cross-cultural studies of facial expression. In P. Ekman (Ed.), Darwin and facial expression (pp. 169–222). New York/London: Academic Press, Inc.
- Ekman, P. (2006). Kłamstwo i jego wykrywanie w biznesie, polityce i małżeństwie. Warszawa: Wydawnictwo Naukowe PWN. (Telling Lies: Clues to Deceit in the Marketplace, Politics and Marriage, 2001).
- Ekman, P., & Friesen, W. V. (1982, Summer). Felt, false, and miserable smiles. *Journal of Nonverbal Behavior*, 6(4), 238–252. http://www.paulekman.com/wp-content/uploads/2013/07/ Felt-False-And-Miserable-Smiles.pdf. Accessed 8 Aug 2014.
- Ekman, P., Friesen, W. V., & Simons, R. C. (1985). Is the startle reaction an emotion? *Journal of Personality and Social Psychology*, 49, 1416–1426.
- Ekman, P., Friesen, W. V., & O'Sullivan, M. (1988). Smiles when lying. Journal of Personality and Social Psychology, 54, 414–420.
- Ekman, P., Davidson, R. J., & Friesen, W. V. (1990). The Duchenne smile: Emotional expression and brain physiology II. *Journal of Personality and Social Psychology*, 58(2), 342–353.
- Fossey, D. (1983). Gorillas in the mist. Boston: Houghton Mifflin Company.
- Frank, M. G., & Ekman, P. (1993). Not all smiles are created equal: The differences between enjoyment and non-enjoyment smiles. *Humor: International Journal of Humor Research*, 6(1), 9–26.
- Goodall, J. (1997). Przez dziurkę od klucza: 30 lat obserwacji szympansów nad potokiem Gombe. Warszawa: Prószyński i S-ka. (Through a Window. Thirty Years with Chimpanzees of Gombe, 1990).
- Harker, L., & Keltner, D. (2001). Expressions of positive emotion in women's college yearbook pictures and their relationship to personality and life outcomes across adulthood. *Journal of Personality and Social Psychology*, 80, 112–124.
- Iacoboni, M. (2008). Mental mirrors. www.naturalhistorymag.com/features/28883/mentalmirrors. Accessed 3 Mar 2014.

- Jaffe, E. (2010). *The psychological study of smiling*. http://www.psychologicalscience.org/index. php/publications/observer/2010/december-10/the-psychological-study-of-smiling. html. Accessed 8 Aug 2014.
- Landis, C. (1924). Studies of emotional reactions: II. General behavior and facial expression. Journal of Comparative Psychology, 4, 447–509.
- Provine, R. R. (1996). Laughter. American Science, 84, 38-47.
- Rojek, E. (2003). Łaskotanie mózgu. Co wiemy o śmiechu i humorze. Kosmos, 52(2-3), 237-247.
- Sacks, O. (2008). Mężczyzna, który pomylił swoją żonę z kapeluszem, Zysk i S-ka. (*The man who mistook his wife for a hat*, 1985).
- Steć, D. (2003). Jeśli masz w sercu radość, nie zapomnij o tym powiadomić swojej twarzy! czyli o karnawałowym przeżywaniu czasu Miłosierdzia. Czas Miłosierdzia, nr 1(153)/2003. http:// www.sopocko.pl/artykuly.php?id=31. Accessed 3 Mar 2014.
- Szarota, P. (2006). Psychologia uśmiechu. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- Widrich, L. (2013). The science of smiling: A guide to humans most powerful gesture. http://blog. bufferapp.com/the-science-of-smiling-a-guide-to-humans-most-powerful-gesture. Accessed 3 Mar 2014.
- Wolsza, K. (2012). O radości i przyjemnościach życia. Życie Duchowe Żyć w radości, JESIEŃ 72/2012. http://www.zycie-duchowe.pl/art-250.o-radosci-i-przyjemnosciach-zycia. htm. Accessed 3 Mar 2014.

Maria - Magdalena Weker is an adjunct at the Institute of Philosophy of University of Cardinal Stefan Wyszyński, Warsaw, Poland. She was the research assistant at the Faculty of Neurocognitive Science of University of Social Sciences and Humanities, Warsaw, Poland. She was a PhD-student visitor at the University of Calgary, Canada. She participated in researches of mind and perception carry out at The Nencki Institute of Experimental Biology, Warsaw, Poland and The Institute of Mother and Child, Warsaw, Poland. Her research interest is the interaction of mind and perception, especially the philosophical aspects of consciousness and neurobiology of mind. She has authored several papers on this subject. She was awarded a PhD degree in philosophy from University of Cardinal Stefan Wyszyński, Warsaw, and also holds degrees in psychology (University of Warsaw), biology and philosophy.

Chapter 6 The Orientation of Longing

Christopher Southgate

Abstract In this article I advance the thesis that longing is one of the most fundamental of human emotions, and has a major part in shaping the world. I distinguish between desire and longing, and consider approaches to the subject in the Christian tradition. I stress the importance of combining ancient insights, such as those of Augustine and Dante, with those of Freud and Darwin, such that the range of human longings is not denied, but properly oriented. Drawing on the work of Wendy Farley and Sarah Coakley, I postulate that the human vocation is to orient our longings by what God longs for, to pray authentically 'Thy kingdom come, thy will be done'. Matthew 25 gives an indication of the practical outworking of such conformed longing. Such prayer, the true outworking of human freedom, is ultimately the work of the Holy Spirit in the believer, which leads in turn to the fruits of the Spirit and the virtues of faith, hope and love.

Keywords Longing • Desire • Plato • Dante • Freud • Darwin • Sarah Coakley • Lord's Prayer • Letter to the Romans • Song of Songs

Introduction

The human emotion of longing shapes our world in all sorts of powerful ways. Religious longings – for salvation, for holiness, for enlightenment – continue, across the world, to have a huge influence on human behaviour, and are also implicated in many wars that both impoverish and embitter human beings and degrade natural environments. Consumerist longings – to be younger, or older, more perfect, more stylish, more sexy, more mobile – drive much of the world's economy. Much other human activity is driven by the longing for security – for peaceful streets, for reliable supplies of food and water. So it could be argued that indeed longing is *the* human emotion that shapes the contemporary world.

C. Southgate (⊠)

Department of Theology, University of Exeter, Exeter, UK e-mail: c.c.b.southgate@ex.ac.uk

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_6

All consumerist desires are eminently understandable in psychological terms in the evolved animals we are. They are brilliantly depicted in the opening section of James K. A. Smith's *Desiring the Kingdom*, in which he analyses a shopping mall (Smith 2009). Smith shows us how consumerist lives have their ritual practices, they satisfy religious as well as hedonistic needs. Reflection on consumerism also shows that much desire is semiotic in nature – we desire one thing out of conviction of its connection to something else. That pair of designer sunglasses we buy is more than anything else a sign, to ourselves and to others, that we are a certain sort of person with a certain sort of life. Maslow importantly showed the hierarchical character of human need (Maslow 1943). As one goes up the hierarchy, so needs are addressed in increasingly indirect and semiotic ways. I argue elsewhere (Southgate 2014) that the human vocation is to become a sign, a sign of Christ who is the utterly reliable sign of the character of the divine life. Adorning one's life with other signs can, at its worst, be testament to idolatry.

In this article I shall review the background to a Christian understanding of longing, and propose that traditional understandings need to be complemented with insights from psychology and evolutionary theory. I shall then propose that the proper orientation of human longing is always to long for what God longs for.

There is in the Christian tradition a very extensive literature on longing, usually expressed in terms of the language of desire. The primary source, arguably, is not biblical but the philosophy of Plato. Plato's fascination with desire runs through many of his dialogues, and is expressed in two of his most famous myths, that of the two horses in the *Phaedrus* and Aristophanes' account of the origin of love in the *Symposium*. Plato's concern is continually to urge the disciplining and suppression of earthly desires, in order that the purer desire for the Good may flourish.

Early Christian thought developed in a climate of middle Platonism and Stoicism. Out of this came the New Testament's exhortations to 'set your hearts on the things from above' (Col. 3: 1–2), and Paul's fascinating exploration of the pre-Christian's dividedness in Rom. 7. In Evagrius and other Desert Fathers we find sophisticated psychological insights into 'the passions' that distort our authentic longing for God.¹ But the classic Christian heir of Plato on this subject is Augustine of Hippo, who draws movingly on his own biography to express the possibility of the transformation of desire. Our hearts are restless until they rest in God. That reflects our truest and most fundamental longing.² The tradition's continuing fascination with desire is indicated by, among other things, the many commentaries on The Song of Songs written throughout the patristic and mediaeval periods.³

¹For a contemporary reading of the passions see Farley 2005: chs 3–4.

²So desire for something other than for God's sake counts as *cupiditas* (Oord 2010: 61).

³See Coakley 2013: 127–32 on Origen's treatment of The Song of Songs.

Desire and Longing

So far I have used the terms desire and longing interchangeably. Clearly the terms overlap. There is, I suggest, a stronger hint of the conscious will about desire. In desire, the proportion of will and emotion shades towards will, whereas in longing, emotion predominates. But the main distinction I want to propose is that desire tends to imply a relation to something achievable, even something that may be grasped at the expense of others' well-being, whereas longing for something seems to suggest that the long-er cannot grasp the object.⁴ It might be said that all ten of the commandments in the Decalogue are restrictions on the operation of grasping or controlling desire. In limiting such grasping at desire, they make space for longing. Here we might discern a helpful overlap with Jan-Olav Henricksen's category of metaphysical desire, and his insistence that God must always be more than we need, and open up a reality beyond what we can contemplate (2009).

This sense of transcending desire is also very strong in Sebastian Moore (1989) and I return to it below. For Moore, our desire continually finds itself baffled by wanting something that demands a change in the wanting self (cf. 1989: 7). In the terms I am marking out, this is one of the characteristics of healthy longing. Because we cannot grasp the object of our longing while remaining the self that first experienced that desire, longing invites us to change, indeed to transcend ourselves, so we can be placed in a healthier orientation to the object of our longing. Unfulfillable longings may need to be renounced - as in the (for most) hopeless longing to become a racing driver. They may need to be reframed, as in the longing for someone who is the partner of another. They may need to be worked through, as in the longing that accompanies bereavement. Longings may need to be explored, because the real object may not in the first instance be clear - as in many cases where someone discerns a vocation to ministry. Or the longing may need to be pursued, but always with an openness to being formed, being changed, as with the longing to know more fully a lover, or a friend, and most notably the longing for God. There is always, then, an element of surrender in the pursuit of a longing, surrender of the past self (cf. Moore 1989: 7).

The Christian tradition teaches that desire, purified, becomes the desire for union with God, knowledge of God, enhanced relationship with God. It therefore becomes something that cannot be grasped at or seized.⁵ Purified desire, then, turns into longing. I have been helped in thinking deeper into this subject by Eleonore Stump's remarkable book *Wandering in Darkness* (2010) and by her distinction between propositional desires – desires that such and such might be the case – and desire for a person.⁶ I suggest that what TS Eliot called 'the purification of the motive in the

⁴Indeed, longing may be felt for someone or something that is already in the past, in which case the term 'yearning' perhaps expresses better the pathos of that state.

⁵Cf. Wendy Farley's comments on contemplation as never leading by way of possession (2005: 123).

⁶See C. S. Lewis (1960: 109–10) on the difference between sexual desire that sex may take place, and erotic desire for a person who is sexually loved.

ground of our beseeching' (Eliot 1969: 196) is a process by which 'desire that' becomes 'longing for', longing for God. Insofar as this remains also a 'longing that', it becomes concentrated on the parallel longings that 'thy Kingdom come' and 'thy will be done', which in themselves are one longing, and are enacted believer by believer as persons of desire become conformed to God's will.

A remarkable characteristic of the most healthily oriented longing is that it desires its own increase. Addiction causes the desire to return, ever more strongly, after it is gratified, yet the sufferer wants to withdraw from this cycle of compulsion, but holy longing wants to want more, to be ever more open to the infinite riches of the journey with and towards God (cf. Moore 1989: 11).

I suspect contemporary Christian commentators on desire and longing are divided between those who draw their inspiration from Augustine, and behind him Plato, and those who take Charles Darwin and Sigmund Freud as their starting points. The former group may tend to see the latter as reductive, and probably inalienably atheistic. The Darwinian/Freudians may tend to see the Plato/Augustine followers as over-spiritualising and unscientific. Darwin and Freud were of course not moral philosophers – they do not seek to tell us what we should long for, but their insights and those of their successors tell us a huge amount about why we tend to desire what we do. A great part of how humans behave, and construct societies, may be understood in evolutionary terms, centring on the drives to survive, to reproduce, and to safeguard kin. The work of analysts and therapists from Freud onwards has helped us see the strength of those drives, and the pathologies that arise from some types of effort to suppress them. This concern over the unhealthy suppression of desire generates a fault-line between the two understandings, the Platonic/Augustinian and the Darwinian, which it is important for theologians to address.⁷

Philip Sherrard's study *Christianity and Eros* depicts in quite a chilling way the effects on understanding sexuality of relying only on the Platonic/Augustinian strand of thought. For Augustine, genitals were not needed in paradise, they were a consequence of the fall, and every act of coition links humans to the primal sin.⁸ Marriage, although taught by the Church as a sacrament, is really an expedient for the bearing of children. This emphasis can be seen even in an encyclical of Pope Paul VI dated 1968 (Sherrard 1976: ch. 1). Another strange legacy of Plato's mythology is found in the work of Russian thinkers such as Soloviev and Berdyaev, who supposed that humans were first created as androgynes – Sherrard spells out well the misogyny to which such views can give rise (1976: ch. 3)

Henricksen offers an important category of desire, desire for what is not yet fully known. He calls this 'metaphysical desire', which thereby has the capacity to be transformative. But it would be too easy, in invoking a term such as metaphysical

⁷Coakley writes of the 'messy entanglement' of sexual desire and desire for God (2013: 43).

⁸So also a great thinker of the Eastern Church, Gregory of Nyssa, for whom 'it is in man's investiture with animal sexuality that the most fatal consequences of his fall are evident ... In Paradise, man (*sic*) had an angelic mode of propagation. This he lost with the fall, and he was given in its place a mode proper to animals ... for St Gregory the sexual life is the source of the passions which, when stirred up, lead to sin' (Sherrard 1976: 66).

desire, to default to an emphasis only on spiritual desire, with a denigration of the physical. Such views easily part company with the character of human beings as evolved animals, and lose sight of the possibility that our more meta-physical desires have an element of projection about them. Even Plato used a 'physical' myth to express the origin of human longing for other humans (*Symposium* 189C–193E), and it is interesting that Stump chooses the term 'heart's desire' for the ultimate focus of our longing, a term that implies the physical, and indeed a physical basis going beyond the merely rational (Stump 2010: 7).

It is possible to argue that positions that set aside Darwin and Freud and follow Augustine do so on the basis of an implicit belief in a prelapsarian perfection. Direct relationship with God was present in the garden in Gen. 2, and that, so such a position suggests, should be our reference point in respect of human desire. But wise as that Eden story is, it misleads us if it makes us suppose that humans ever actually were in that state. Rather a state in which longing for God comes to predominate, among the range of human animals' physical desires, must be an emergent state made possible by millennia of evolution (as well as God's gracious calling to the developing human consciousness).

What then do the insights of evolutionary biology and the psychology of the unconscious contribute to our theological understanding of desire? A full answer to that question would take us well beyond both my expertise and the scope of this article. But here are some initial thoughts. There is a useful link, too little explored, between Darwinian insights and the doctrine of original sin.⁹ But that doctrine should in my view be turned on its head. It is not that the first humans were fully self-conscious and made an informed decision to defy God, but rather that selfish behaviour, and the assertion of boundaries, were an entirely predictable product of the naturally evolved drives of primates in a competitive and hostile environment. Humans never knew perfect relationship, or pain-free longing. It is the emergence of goodness, generosity, and transcendence of the interests of the self that is the remarkable feature of the evolution of human behaviour, not the ubiquitous presence of selfishness.

There is also a link between psychoanalytic understandings and the sense that we find for example in Dante (but going back to Plato) of the need for love to be refined, purified, in order that it focus on the truth. We emerge from childhood with a strong sexual energy complicated by certain necessary frustrations to our drives. Healthy adult expression of sexuality is assisted by understanding those frustrations, and sublimating the drives as appropriate – not, notice, by denying their existence or regarding them as part of fallen or incomplete humanity. Such denial can lead to fear and guilt of toxic proportions.¹⁰

The Bible helps us here because of the inclusion within it of the astonishing erotic poetry of The Song of Songs. But it frustrates us by offering no commentary, or system, by which we can integrate these insights into a Christian life. (Any more

⁹See Darryl Domning's work on this in his study *Original Selfishness* (Domning and Hellwig 2006).

¹⁰As Moore notes, 'psychoanalysis ... consists in giving permission for desire' (Moore 1989: 18).

than the Book of Ecclesiastes, or come to that the Book of Job, is so integrated.) I suggest that the place of The Song is not, as the mediaeval commentators tended to insist, that it is an allegory of the delight that can exist between Christ and the Church, but to remind us that physical desire is just that, whole-body physical, and does not necessarily need to be denied, or sublimated into the contemplation of the loved face, or her extraordinarily beautiful eyes, in an extension of the sort of pre-adult attraction Dante first felt for Beatrice.

In her recent monograph *God, Sexuality and the Self* (2013), Sarah Coakley quotes an exquisite passage from Luce Irigaray on 'communion in pleasure'. She writes of 'the shared outpouring, ... the loss of boundary to the skin into the mucous membranes of the body, leaving the circle which encloses my solitude to meet in a shared space, a shared breath ... In this relation we are at least three, each of which is irreducible to any of the others, you, me and our creation ... that ecstasy of ourself in us' (quoted in Coakley 2013: 317–8). Irigaray identifies the key theme of self-transcendence, to which I return below, but importantly, and at variance with the tendency of so much Christian writing, she recognizes that that self-transcendence can be achieved in the context of the physical act, and not only through its renunciation.¹¹ A rounded account of human desire and longing must make space for this possibility.

Divine Longing

I now turn to the issue of divine longing. The biblical witness contains little direct reference to longing on the part of God. Perhaps this is because of the very strong assertion of divine power, both in creation and redemption. God's desire is implemented *ipso facto*, as in his desire to make his dwelling on Zion (Ps. 132). But God also desires what God does not compel. God desires, we are told, 'truth in the inward being' (Ps. 51: 6); 'steadfast love and not burnt offerings' (Hos. 6: 6). God's covenant-making may be seen as a desire for intimacy (Elmer Martens quoted in Oord 2010: 130). And we also catch hints of divine longing in the language of Hosea 11, and when Jesus weeps over Jerusalem in Luke 19.12 As Coakley indicates, a more explicit articulation of divine longing comes, perhaps surprisingly, in the neo-Platonic writings of Pseudo-Dionysius. 'The divine longing is the Good seeking good for the sake of the Good' (quoted in Farley 2005: 1). Or again, 'the very cause of the universe ... is, as it were, beguiled by goodness, by love, and by yearning and is enticed away from his transcendent dwelling place and comes to abide within all things ... That is why those possessed of spiritual insight describe him as "zealous" because his good yearning for all things is so great and because he stirs in men [*sic*] a deep yearning desire for zeal' (quoted in Farley 2005: 101).

¹¹As Sherrard notes, this path is fraught with dangers, but so much better than 'pretending to be bodiless or sexless' (Sherrard 1976: 48).

¹²A bitter longing heightened by the broken grammar of the verse (Voorwinde 2011: 149–50).

Indeed it is only reasonable to presume that God also has longings, that God longs to see a Christic freedom, the freedom of the truly human being, emerge in each one of us. To take another famous text from a different part of the New Testament, 'God so loved the world that he sent his only-begotten Son, that whoever believes in him should not perish, but have everlasting life' (John 3: 16). God does not compel humans into everlasting life, into the new creation in Christ, but longs for human beings to turn away from perishing, and come into the full possibilities of their existence. For Coakley, indeed, desire 'is an ontological category belonging primarily to God, and only secondarily to humans as a token of their createdness 'in the image' (2013: 10). So the orientation of human desire is necessarily conditioned by divine desire. Coakley goes on to link this to the pneumatological language of Romans 8 – 'Likewise the Spirit helps us in our weakness; for we do not know how to pray as we ought, but that very Spirit intercedes with sighs too deep for words' (8: 26). This is a very interesting and I think a powerful reading - not that we do not know the mechanics, as it were, of prayer, but that we do not know how to order and focus our longings towards God, unless the Spirit involves us in God's own desire. The Spirit comes to our aid through our own longing. Coakley writes of 'deep prayer in the Spirit' that it 'veritably magnetizes the soul toward God', in a way to which human-human sexual attraction is an analogy. Yielding to the sighs of the Spirit shows us that 'prayer at its deepest is God's, not ours' (2013: 115). However, divine longing is, for Coakley, not a manifestation of need or privation, but an expression of the character of the Triune Creator. The desire within the Trinity is as Coakley puts it, 'the perfect mutual ontological desire that only the Godhead instantiates - without loss or excess. Here is desire not of need or imposition but of active plenitude and longing love' (2013: 333). This divine longing will only fully be consummated when 'God will be all in all' (1 Cor. 15: 28).¹³

Rom. 8: 19–21 tells us that the creation also longs, stands as it were on tiptoe (*apokaradokia*), awaiting the freedom of the glory of the children of God ($t\bar{e}n$ eleutherian tes doxes ton teknon tou theou). This is a very enigmatic phrase, but there are strong connections to be made to another dense passage in Paul, namely the midrashic passage on glory in 2 Cor. 3: 7–18. In 3: 17, Paul tells us that where the Spirit is (and is Lord), there is freedom. There, in other words, is a release from the idolatries that trap our longings, from the false orientations that drain our spirits of vitality and capacity for love. He then rephrases that, in speaking of our being metamorphosed [the same verb is used as in Rom. 12: 2] into the image of Christ and transformed 'from one degree of glory to another' (v. 18).

'The freedom of our glory' in Romans 8, then, can be linked to the picture Paul gives us in 2 Cor. 3, if we think of the human being coming truly into the image of

¹³The concept of longing not out of need, but out of fullness, is an interesting one. It may be argued that human longing is distorted by the aching need to make up what we lack (or think we lack). So we tend not to long for the good of others with the generous, kenotic giving of our fullness that we find in 'the mind that was in Christ Jesus' (Phil. 2: 5; cf. also 2 Cor. 8: 9). So humans' cultivation of that generosity would be a way in which our longings might be conformed to the divine longing.

Christ as that human being becoming a sign of the divine life. Such a signification can only be lived out in freedom – the traps of idols and compulsions would distort the image and corrupt the sign. Idolatry, then, takes our orientation away from God, takes our longings away from what God may be presumed to long for.

So it is important to clarify what it is that Christians believe God to long for. We have noted the famous Johannine quotation about God's love of the world, and therefore God's longing for the *metanoia* of the individual, and individuals' acceptance of the gift of eternal life. But at the level of society, God's longing must be presumed to be for the embracing of the values of the Kingdom, such that indeed the prayer may be fulfilled 'thy will be done'. The signs of the Kingdom are proclaimed by Jesus in various places, such as Luke 4: 18–19 and Matthew 11.5; the response we are called to is perhaps best seen at Matthew 25: 31–45 – Jesus both identifies totally with the plight of the hungry, the naked and the imprisoned, and longs for his servants to serve him through meeting their needs.

Is there not a danger, however, as soon as we talk of desire for God and of God's own desire, of retreating into patristic concepts that fail to do justice to our contemporary self-understanding? The difference in a properly modern approach is that natural human drives are not regarded either as non-existent, or yet evil. Rightly understood, they can take their place within the 'web of desire' of which Stump talks (Stump 2010: 7–8). But they must take their fundamental *orientation* from those twin petitions in the Lord's Prayer, 'Thy kingdom come, thy will be done'. A biblical image of oriented longing can be derived from Jesus' saving that 'foxes have holes ... but the Son of Man has nowhere to lay his head (Mt. 8: 20). Ultimately the true human being has no abiding home, but only the fundamental orientation towards God, only the journey of longing, towards the coming Kingdom. An exhortation to this comes in Phil. 4: 6-7 - desire is to become not anxiety, but prayerfulness. Darwinian and Freudian understandings will insist on the reality of our earthly desires, and that they are a huge part of our energy and identity as creatures. It is not healthy to try to deny these desires their existence, their character, or their power.¹⁴ The issue of right response to God, then, cannot be about the denial of those desires, but it can, I argue, be about their orientation.¹⁵ Part of being conformed to Christ, being 'metamorphosed by the renewal of [our] minds' (Rom. 12: 2), is the reorientation of our longings.¹⁶

The orientation of longing is an important theme of Dante's great trilogy *The Divine Comedy*. One of the many chilling features of Dante's depiction of the

¹⁴It is interesting to read of C. S. Lewis, sometimes thought of as such a stern apologist for orthodox Christianity, noting that sexual activity 'reduces the nagging and addictive character of mere appetite' (1960: 112). What he warns against is rather attempting 'to find an absolute in the flesh' (114). That would be idolatry.

¹⁵The 'right aiming' of desire, in Gregory of Nyssa's phrase (quoted in Coakley 2013: 285).

¹⁶ Stump analyses this in terms of second-order desires (2010: 124), the desire in a person that they would desire certain things, and ultimately 'the re-folding of the heart's desires' (2010: 443–8). Though I prefer the language used here of the orientation of longing, I find her Aquinas-based analysis of the necessary integration of the person in the formation of second-order desires, and the necessity to that integration of relationship with God, very helpful.

Inferno is that the souls there are fixed in the desire in which they died, and that desire remains insatiable. The great pagan philosophers suffer no other penalty 'Than to live here without hope, but with desire' (Inferno IV. 42).¹⁷ And in the Second Circle we meet Francesca da Rimini and Paolo Malatesta, brother- and sister-in-law, who long for another sexually. They only discover their desire when interpreting a sign of the possibility of illicit romance - when they are reading together the love of Lancelot and Guinevere. They find an image of the love that burns with them, and the image does its work. As Dante has them say, 'That day we got no further with our reading' (Inferno V. 138). Desires in the circles of hell remain strong, may even be acted out, but they are never either slaked or transformed. Whereas in the Purgatorio longings are gradually consummated, as in the desire of the slothful to gain the virtue of industry. The Paradiso, surely the least read, and perhaps the least successful, of Dante's trilogy, endeavours to structure what must remain ultimately incomprehensible to us. Its subject is eschatological desire, humans' longing for their ultimate destiny. Here longing no longer aches, even in those who do not attain the highest circle.

It is noteworthy that Dante on his journey towards and into Paradise never has to abandon his love for Beatrice. The very central place of a female figure, other than the Virgin, in a Christian synthesis, is surely one of the most remarkable elements in the *Divine Comedy*. It contrasts with, for example, Petrarch's sense that he must abandon his love for Laura. For Dante, that love for the woman he first met when they were both 9 years old acts as an orienting mark for his desires. Because of that beacon of nobility, Dante did not have to wait in hiding, like Arnaut Daniel, in the purgative fire that refines (*Purgatorio* XXVI. 148).

It is interesting too that Dante three times returns to sexual lust in his *Comedy*, finding a place for the *lussuriosi* in Purgatory and even Paradise as well as Inferno. Nevertheless, he calls carnal love 'the poison of Venus' (*Purgatorio* XXV. 132), and his longings are oriented by this (to modern eyes very strange) preoccupation with someone he met when they were both children, someone who was then married to another, as Dante himself was. This, one of the great love-relationships of Western literature, perfectly illustrates the Christian tradition's suspicion of adult-adult sexual relations.

Can we say more about what the re-orientation of longing should look like? Can we offer a more contemporary account, more affirmative of the physical animals we each are, without losing the extraordinary insights that Plato, Augustine and Dante offer us?

The contention of this article is that part of growing into the image and likeness of God, after the example of Christ, through the grace and power of the Holy Spirit, is to come to conform our own longings to the divine longing. Just as Jesus's 'if only' at Luke 19: 42 presumably echoes the longings of the Father, so our longing should echo that of Christ. Thérèse of Lisieux wrote that: 'To love you as you love me, I must borrow your own love – it is the only way which will satisfy my desire' (quoted in Farley 2005: 16). Farley herself writes, 'In our thirst we are images of the

¹⁷Translations are by C. H. Sisson (Dante Alighieri 1993).

power that thirsts for the beauty of each existing thing' (2005: 17). 'The divine image gives rise to a flame of desire that burns without consuming' (21). Dante's famous 'In his will is our peace' (*Paradiso* III. 85) is itself a translation of Augustine. Tempered by a twenty-first century understanding of the horrors of the world, and the elusiveness of the Kingdom for which Christians are to long, we might re-render this, less elegantly, 'Within God's longing we find our wholeness, the true orientation of our own longing.' This is not to say that those desires disappear that go with being the animal that Darwin and Maslow describe. The reality of the longings of physical creatures for food, for healing and for love is continually affirmed in the Gospels. So we are still faced with the struggle to combine these descriptions of human longing.

Farley calls desire for God the warp against which we weave the particularities of our lives (2005: 3), and insists, interestingly, that it would be wrong to orient our desire *only* on God's eternal life (10–11). The warp needs weft for a full life. This image of warp and weft seems to me very interesting. Our other desires may pull in a different direction, but if the desire for God remains strong, the shape of the life will be retained. The stronger the desire for God becomes, the more the life will develop a holy orientation.

Stump writes of 'the web of desire'. She supplements this with the terminology of 'heart's desires', which would correspond in my terminology to a person's principal longings (almost by definition a heart's desire is not something fully realized, or fully in the person's control).

Stump also uses a model which will surely commend it to readers of this volume, that of the 're-folding' of a heart's desires, as the three-dimensional structure of a protein might refold (Stump 2010: 443). One strength of this picture is that it emphasizes continual movement – the desiring self is never static, and is continually relating. We are not, as Moore says, isolated monads, but constantly relating to our environment in all sorts of ways. Relation, not isolation, is the default (Moore 1989: chs 2, 12). And desires and longings are, as again the model would suggest, always plural and diverse.

The model would also stress that changes in the patterns of desire are a process, not a once-off change. For Coakley, contemplation is 'a progressive modulator and refiner of human desire'.¹⁸ Therefore, '[s]exual desire ... is thus drawn into an inexorable tether with all other desires, judged by its approximation, or lack thereof, to the purity of divine desire' (2013: 52).

I am not going to get carried away with the power of this analogy with protein folding. I merely point out that it is perhaps a more generative one than the purely two-dimensional picture Farley offers of warp and weft, and also a richer one than that of a web. It is a dynamic one, since proteins are always in motion, always interacting with their environment. And it does make imaginative space for the notion that all sorts of desires are natural and understandable, bound to arise in the flexing

¹⁸She continues: 'in its naked longing for God, it lays out all its other desires – conscious and unconscious – and places them, over time, into the crucible of divine desire.' 'Over time' is the key phrase here.

of the sort of 'molecule' we each are, even if they lead to states that are not all that human flourishing might be.

The divine invitation is not, as the tradition has too often held, that we humiliate those natural desires,¹⁹ but that we reconfigure them radically in an understanding that calls for love even of enemy (Matthew 5: 44), and sees very understandable efforts to store up security as idolatrous and vain (Luke 12: 18f). This surely is the essence of the matter – however we want to picture it – that once the matrix of longings is reconfigured around love, and God's gifts in creation are received as gifts, then the physical desires of physical creatures start to incarnate a life lived towards the divine longing. We begin, while remaining fully ourselves, to transcend the selfishness of those selves. Indeed, it is through this process of self-transcendence (cf. Southgate 2008: ch. 4) that we open up the possibility of becoming more truly the full selves we are called to be.²⁰

Another way of putting this would be to say that much of our creativity stems from sexual energy, and that energy can be focused in a range of ways (cf. Sherrard 1976: 78–83). Where the self is accepted, so the ego's fears are stilled, the self can be given over out of its fullness for the love of the other, and the Spirit can give 'the increase' of that self-gift (cf. 1 Cor. 3: 6) The great example, for the Christian, is always Jesus, in whom we see the full possibility of the 'self-given self' (Southgate 2011), 'the man of oneness' (Moore 1989: ix), whose desire is completely oriented by his perfect attention to the Father. But the great problem, for the Christian, is that we are given so little indication of how Jesus handled his sexual energy. (And the other great model of human behavior, the Virgin Mary, is elaborately protected in the tradition from being identified as a sexual being – *vide* the traditional Catholic denial that Jesus had full brothers.)

Hence, again, the importance of The Song of Songs. As I noted above in quoting the passage from Irigaray, self-transcendence can in the right context be catalyzed by sexual self-giving. Sherrard, writing of the work of Soloviev, talks of the importance of encountering 'another living being to whom he (*sic*) attributes an absolute importance and who awakens in him an awareness of his own essential nature' (1976: 56). This is a very particular form of encounter, because the other is met as equal and equivalent to the self but yet still other; there are, therefore, particularly rich opportunities for ego-transcendence in such relationship.²¹

The theme of ego-transcendence is importantly explored in a little book by Moore that is sadly hard to track down now. This is his *Jesus the liberator of desire* (Moore 1989). For Moore, the person is continually required to die to self (or rather

¹⁹So also Farley 2005: 32.

²⁰Here my model differs somewhat from that of Coakley, and is more anchored in a sense that selves in competition with other selves are intrinsic to biological evolution. Coakley's own exploration of co-operation in evolution (2012) would predispose her to her understanding of desire as 'the constellating category of selfhood' (2013: 26).

²¹ 'We all desire to be desired by one we desire, but the fulfilment of this longing involves much dying to ego' (Moore 1989: 104). Which is not to deny the huge problems associated with this path to self-transcending longing. Moore notes 'No desire is as prone to self-deception ... as is sexual desire' (Moore 1989: 94).

a particular ego-construction of self) and be reborn at a more profound level. A person longing for a deeper relationship with a lover is, as I noted above, always finding themselves anew. Our desires are only liberated when we fully realize in whom we live and move and have our being. 'The liberation of desire is not 'getting what I want' but 'coming to want as ultimately as I am'' (Moore 1989: 18). But we dread not needing the things we think we cannot do without – more indeed than we dread not having them. Self-transcendence means deepening trust in a mystery, a trust going beyond what can be known. It therefore involves a kind of death, of reliance on the known (Moore 1989: 19).

Moore's view of sin is also striking. He sees it not so much in disordered desire (the familiar view) but in the inertia of the ego, which represses the desire to desire more. Sin may also be understood as an idolatry of the ego at its present state of development, which inhibits the surrender of the self to further possibilities arising out of the longing for God (Moore 1989: chs. 4–5). The advertising industry seizes upon this, offering all sorts of easy fixes to bolster a particular shape of the identity, which is in fact that of 'consumer', though disguised in the trappings of material aspiration. Sin, then, can be seen in the absence of the proper fear that attends self-transcendence, in the denial of authentic desire, in 'the arrogance of common sense' (Moore 1989: 34).²²

Holy desire, then, will be very attentive to the possibility of connecting with and co-operating with others (cf. Farley 2005: 66), for it is in relationship, as Moore insists, that we find our true selves.

I return now to my proposal about how human and divine longings might become conformed. Coakley points to the importance of Romans 8, very much in accord with my own thinking. In Paul's language of 'groaning' (Rom. 8: 22–3), the Spirit conforms itself to our own struggle and sense of incompleteness, and groans with us. Before we even conform our desire to God, God has awakened that desire, and met it in God's own. And when we pray, hardly knowing how to pray, seeking to orient our longings towards God, and summing up our prayer in the words 'Thy Kingdom come, thy will be done', the Spirit catches up our incoherent longings and prays them in our place (Rom. 8: 26–7). This role of the Spirit is central to both Coakley's model and my own. She writes that the Spirit 'painfully darkens my prior certainties, enflames and checks my own desires' (2013: 56).

The activity of the Spirit in respect of God's longings and our own is, for me, beautifully caught in Bianco di Siena's fifteenth-century hymn, translated into English as 'Come down O Love Divine'. The hymn begins 'Come down O Love divine/seek thou this soul of mine/and visit it with thine own ardour glowing'. 'Ardour' is a fascinating word, connoting as it does not only passionate love, but

²²Moore also offers a very interesting reading of the Gen. 3 story, pointing out that part of the disruption the story describes as resulting from the Fall is that the 'higher' nature of human beings ceases to befriend the 'lower', the physical. The human beings in the garden became ashamed of their nakedness. The whole burden of the tradition (much influenced by Augustine), is that the lower fails the latter, by virtue of its disordered lust. Moore says rather that lust is secondary, and results from primordial shame (1989: ch. 10)

also the Spirit's longing for communion with the soul of the believer. The last verse begins 'And so the yearning strong/with which the soul will long/shall far outpass the power of human telling.' The effect of the Spirit's longing love, the hymn tells us, is to take away the power of the passions, to evoke true lowliness of heart, and to evoke in the believer a most powerful yearning, not only, I would suggest, for God but for what God longs for, a radical conversion of hearts.

In putting together these fine phrases I do not suppose for a moment that this conversion of the heart, re-orientation of the longing, is an easy process. The 'purification of our motive' is a lifelong struggle, characterized by seemingly endless failure. That is what it means to be a sinner. The virtues, Farley tells us, are the muscles of our spiritual lives – we need their tone, their habits, to keep us moving onwards. Love, which she calls 'the most opulent expression of our power', needs the virtues to keep it balanced (2005: 152). But even the virtues have counterfeits at their elbow.

The language of the orientation of our longing can all too easily slide into the language of will mastering emotions. That is not at all the model I want to convey here. The will does have a role, transformed 'by the renewing of our minds', in preventing us from acting on our own destructive longings. But this is only one role within a complex matrix. I suggest that to recognize and accept the naturalness of our longings, and to perceive that certain desires may be expressions of deeper longings, takes a particular fusion of intellect, imagination and emotion, a listening to the self that is much more than analytical.

Because the re-formation of our longings to conform to God's longing is a reformation of the pattern of the emotions (see also Gorringe 2001 for an emphasis on the importance of the senses), it cannot be wrought by the will alone, though the will does have a further important role in sustaining a discipline of prayer and worship. But ultimately the re-orientation I am describing is the work of the Spirit on the emotions themselves, growing in them the fruit that is so beautifully listed in Gal. 5. (Self-control, note, is one but only one of these fruit, and comes last in the list.) Beyond even these fruit, the work of the Spirit is to strengthen in us what have been called the three theological virtues, but which are really the three primary longings for what God longs for. Faith is the underpinning of our primary longing, to be one with God. Hope is the essence of our longing for God's kingdom to come, and love is our longing for the full flourishing of other creatures.

Conclusion

This article has set out to show the importance of the emotion of longing. Having reviewed central elements in the Christian tradition on desire and longing, I explored the possibility of holding to those insights and also learning from modern psychology and evolutionary theory. I advanced the thesis that authentic human longing is oriented by being conformed to God's longing, and investigated how the work of the Spirit might lead to that orientation, without a denial of the reality of other longings.

Bibliography

- Coakley, S. (2012). Sacrifice regained: Evolution, cooperation and god. Gifford Lectures 2012 available on the Web at http://www.faith-theology.com/2012/05/sarah-coakley-2012-giffordlectures.html. Accessed 4 May 2015.
- Coakley, S. (2013). God, sexuality and the self. Cambridge: CUP.
- Dante Alighieri. (1993). The divine comedy (C. H. Sisson, Trans.). Oxford: OUP.
- Domning, D., & Hellwig, M. (2006). Original selfishness: Original sin and evil in the light of evolution. Aldershot: Ashgate.
- Eliot, T. S. (1969). Complete poems and plays. London: Faber & Faber.
- Farley, W. (2005). *The wounding and healing of desire: Weaving heaven and earth.* Louisville: Westminster John Knox Press.
- Gorringe, T. (2001). The education of desire: Towards a theology of the senses. London: SCM Press.
- Henricksen, J.-O. (2009). *Desire, gift and recognition: Christology and postmodern philosophy*. Grand Rapids/Cambridge: Eerdmans.
- Lewis, C. S. (1960). The four loves. London: Geoffrey Bles.
- Maslow, A. H. (1943). A theory of human motivation. Psychological Review, 50, 370-396.
- Moore, S. (1989). Jesus the liberator of desire. New York: Crossroad.
- Oord, T. J. (2010). The nature of love: A theology. St Louis: Chalice Press.
- Sherrard, P. (1976). Christianity and Eros: essays on the theme of sexual love. London: SPCK.
- Smith, J. K. A. (2009). *Desiring the kingdom: Worship, world-view and cultural formation*. Grand Rapids: Baker Academic.
- Southgate, C. (2008). *The groaning of creation: God, evolution and the problem of evil*. Louisville: WJK.
- Southgate, C. (2011). Re-reading Genesis, John and Job: A Christian response to Darwinism. Zygon, 46(2), 365–390.
- Southgate, C. (2014). Glory and longing. Unpublished Sarum Lectures, available from the author on request.
- Stump, E. (2010). *Wandering in darkness: narrative and the problem of suffering*. Oxford: Oxford University Press.
- Voorwinde, S. (2011). Jesus' emotions in the gospels. London: T&T Clark/Continuum.

Christopher Southgate is Senior Lecturer in Theology at the University of Exeter, UK, and Principal of the South West Ministry Training Course. His work on evolution and suffering led to the monograph *The Groaning of Creation* (WJK 2008) and he is also the editor of the science-religion textbook *God, Humanity and the Cosmos* (3rd edn Bloomsbury 2011). He gave the 2014 Sarum Lectures on the theme of glory.

Chapter 7 Cognitive or Affective? A Philosophical Analysis of Modes of Understanding Compassion

Anne Runehov

Abstract The present paper philosophically analyses two contrasting views of compassion. On the one hand there is the view that compassion is irrational and a bad guide to action. Martha Nussbaum calls this view the anti-compassion view. On the other hand there is the view that compassion is the bedrock of the ethical life. This view she calls the pro-compassion view. With the anti-compassion view it is meant that compassion has a false cognitive structure. Instead of respecting the other person(s), compassion insults the dignity of the other person(s) and, furthermore, the dignity of the compassionate agent(s). Kant called compassion 'an insulting kind of beneficence'. Every person should take charge of herself; wipe her own nose. Mercy should be given, but without compassion. With the other view, the pro-compassion view, it is meant that bad things happen to people through no fault of their own and since this can happen to all of us, we need to be compassionate. We can understand the pro-compassion view in terms of I wipe your nose and when I need you, you wipe mine. Compassion is inspired by a combination of humanity and disaster. In contrast to the former view, compassion protects and secures human dignity. However, the problem with both views is that they concentrate too much on the cognitive component of compassion and neglect its affective component. Compassion grounded in emotions is wrong, because then it becomes selective, calculated and misguiding. Perhaps this is why Martha Nussbaum's view on human compassion is so depressing. If she is correct, then there is little hope for the human species, especially (but not only) its males, to become true compassionate beings. Animals are, in her view, more compassionate than humans. The aim of the analysis is, first to map the pros and cons of both views, and second, to show that compassion without affection is not possible. Compassion has a cognitive as well as an affective component.

Keywords Affection • Cognition • Compassion • The anti-compassion view • Emotion • The pro-compassion view • Rationality

A. Runehov (🖂)

Sankta Gertruds Väg 7, Trelleborg 23145, Sweden e-mail: annerunehov@gmail.com

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_7

Introduction

If you want others to be happy, practice compassion. If you want to be happy, practice compassion. (*Dalai Lama*)

What do we mean by the term compassion? The Merriam Webster dictionary tells us that compassion is (1) *sympathetic consciousness* of others' distress together with a desire to alleviate it, and (2) *a feeling* of wanting to help someone who is sick, hungry, in trouble, etc. The origin of the word is (lat.) com+pati, meaning to bear, to suffer.

The first definition of compassion above is understood as a cognitive psychological feature, the second as an affective one. I would say that compassion is both cognitive and affective. Furthermore, I would argue that the affective state of mind precedes the cognitive state of mind. With this I argue against Marc Hauser who argues that emotions come after (or as) the agent understands the behaviour of the other. To him: 'something in the brain must recognize – quickly or slowly – that this is an emotions-worthy situation' (Hauser 2006: 8). In my view that is doubtful because, neurologically seen, the limbic system (which is the seat of affection) is older than the neo-cortex (which is the seat of cognition, especially the frontal lobes). The limbic system is closer connected to survival than the neo-cortex is. It is more direct and unreflected.

Very simply put, you feel another person's pain and then you ponder upon what you can do to ease this pain. You intend to do something or you refrain from doing something. This means though that, when it concerns the affective component of compassion, and under 'normal' neurological conditions, you do not have a choice but to feel with this person. When it concerns the cognitive component, you do have a choice; you help out or refrain from doing so. It is the cognitive component of compassion the present paper takes under a philosophical magnifier, however, keeping in mind that there is an affective component to compassion as well which will become obvious in the end. The philosophical problem is simply that on the one hand there is the view that you should refrain from helping, for several reasons that will be discussed, and on the other hand there is the view that you should make efforts to help the other person, also for several reasons to be discussed. One mutual reason both views have is that they want *to protect and secure human dignity*; hence, affection should not be involved.¹

Let's begin with considering the anti-compassion view, suggesting the directive not to help.

¹I will not discuss the similarities and differences between sympathy, empathy and compassion in this paper. Readers who are interested in learning about how I see the relationship between these traits should see Runehov 2012.

The Anti-compassion View

The advocates of this view of compassion mean that compassion is irrational and serves as a bad guide to action. What they mean is that the affective component of compassion is irrational and should not be trusted as a guide to act upon. But they also argue that compassion has a false *cognitive* structure. To put if differently, we do not think as we should do in relation to the other person. We should think about the other person's dignity as well as about our own dignity as compassionate agents. To put this in clear words, if you give some coins to a person begging on the street, you do not help this person; on the contrary, you insult this person by gesturing that this person is not able to provide for her- or himself, that this person is 'below' your moral level. Every person should take charge of herself; wipe her own nose. This view was endorsed by Plato, the Stoics (especially Seneca) and Spinoza (Nussbaum 2008: 336). But also Kant's moral philosophy should be taken into account here. One can understand why these thinkers viewed compassion the way they did. To them the highest values of being human were virtue, moral purpose and dignity. Of course, people will suffer, encounter misfortunes, lose dear ones, money, status, etc. But these misfortunes were all considered as secondary. One should not pay too much attention to them. Illness and death are part of life, accept it and go on. Losing status or money is a misfortune, but if you mourn it, you merely show that you depend on worldly things, which a virtuous person does not, hence shame on you. To these thinkers, showing compassion implied two things: first, you communicate a loss of dignity to the person, because the person mourns about a worldly loss; and second, you admit a loss of dignity to yourself, because showing compassion for this person shows you are not free from worldly things either. To Plato, a good or virtuous person is:

most of all sufficient to himself for flourishing living, and exceptionally more than others he has least need of another [...] Least of all, then, is it a terrible thing to him to be deprived of a son or brother or money or anything of that sort (Nussbaum 2008: 358).

Kant's view on compassion is that, even though compassion is a 'beautiful' act, it has nevertheless no true moral value. Kant's moral system is built upon the idea of an autonomous, free, rational will that only wills duty. The highest criterion for moral judgement is to act unconditionally virtuously (Höffe 2000: 176–201). Kant's categorical imperative is based upon virtue and unconditional goodness. It is based upon his principle of reason, i.e., on pure reason but in praxis. It means that you should act in a way that the maxim for your moral act through your will may become a universal natural law (Kant, IV: 421; Höffe 2000: 180, my translation from the Swedish). He distinguishes between autonomous and heteronomous will for action. Emotions and sensations are inclinations and are not free (not autonomous), something which is required to be considered morally worthy. They depend on external values; they are not universal; they are heteronomous. This has to do with his distinction of reason between empirical conditioned reason, which is independent on the other hand (Höffe 2000: 169). However, even if Kant also advocates virtue

and duty and the higher good, he does not condemn compassionate or other beneficent actions. Compassion is not *immoral*, rather is it *amoral*. Nevertheless, Kant argues that *Barmherzigkeit* (mercy) cannot be right, because having mercy only accumulates the already existing suffering. Having *Mitleid* (compassion), on the other hand, he sees as a duty, because without it one 'would not be prompted to the caritative action in which alone our duty is fulfilled' (Davies 2001: 237). Here he clearly departs from ancient Greek and Roman moral philosophy. For instance, for the Stoics, compassion is closely linked to cruelty while mercy is seen as a disposition of a wise judge towards mildness in selecting penalties.

Still, for both the ancient Greek and Roman philosophers as for Kant, it is the autonomous will that is to be praised, because it is rational, virtuous and dutiful for the sake of virtue and duty only. The heteronomous will has its values, because it has been chosen freely, but it is pathological in its core.

Let us now take a look at the other view, the pro-compassion view.

The Pro-compassion View

The advocates of this view mean that bad things happen to people through no fault of their own and since this can happen to all of us, we need to be compassionate (Nussbaum 2008: 405). To return to the example of the begging person, the message is to give this person not only some coins, but give her or him some notes, because next time you could be sitting there. The message is, *I wipe your nose and when I need you, you wipe mine*.

In this view, compassion is inspired by a combination of humanity and disaster. In contrast to the former view, compassion protects and secures human dignity while increasing your own level of dignity. In other words, by helping another person, you help this person to retain his or her dignity. Defenders of the pro-compassion view are Rousseau, Schopenhauer and Adam Smith. These thinkers follow Aristotle's definition of compassion, meaning that compassion is 'a painful emotion directed at another person's misfortune or suffering (Rhet. 1385b13; Nussbaum 2008: 306).

Compassion has three *cognitive* components: (1) believing that the suffering is sincere and not faked; (2) believing that the person does not deserve this suffering; (3) believing that the sufferer and the compassionate person possess a similar psychology. Suffering appeals to our sense of injustice (1386b14-15, Nussbaum 2008: 312). However, (2) implies that compassion will be more easily directed to the good person (having no fault in his or her calamity) than to the person who put herself in this situation by incorrect behaviour. While compassion for the good person does not need any deliberation, compassion for the wicked person does. 'Compassion requires blamelessness not only on the part of its object, but also on the part of the onlooker' (Nussbaum 2008: 313). As will be discussed later, this view is not without problems. The third cognitive component can be described in the words of Rousseau, who argues that if one is not aware of one's own vulnerability and weak-

ness, one cannot be compassionate. The rich, he says, are hard towards the poor because they have no fear of being poor (Nussbaum 2008: 315). Hence, in order for compassion to work, there must be a sense of community between the sufferer and the compassionate, without which one will react with indifference, or curiosity at the most. This view is shared by Aristotle and Rousseau (Nussbaum 2008: 317). We need to rewrite the nose-wiping sentence into *if you are like me*, I wipe your nose and when I need you, you wipe mine.

How is the cognitive component related to the affective one? To Aristotle, compassion is linked to pain, memory and fear. There is a mental and/or physical pain when one apprehends another person's suffering; one may be confronted with a memory of one's own calamity when apprehending another person's suffering or one may fear that this horror might happen to oneself (Davies 2001: 234–235). For Adam Smith, compassion has not so much to do with emotions but with imagination of emotions, following impressions of our own senses only, not those of the other person (Davies 2001: 236). We imagine 'how it would be like in this person's situation, how would it feel'. To Schopenhauer, compassion has much to do with emotions, but it should lead to a higher state of being, to a breaking down of the ego (the will as representation), to the Will. To him, if a helping action did not derive from compassion, it does not have any moral value. Rousseau's notion of compassion (*pitié*) is similar to Humean sympathy, but is instinctive and lacks a genuinely moral motivation, namely, conscience.

Discussion

The core of the anti-compassion view is that all people are equal in value. Compassionate acts disturb this equality. This view focuses on the dignity and duty of humanity. In its extreme form, this view eliminates everything having to do with emotions. Even with Seneca's notion of mercy (*clementia*), it remains an entirely cognitive (rational) moral view, liberated from affection. As mentioned above, the idea of mercy is for a judge to be able to choose a penalty that is milder than the one appointed in law. Even if being merciful means being kind to a person in need, it does not need to include affection. The reason for why Seneca allows mercy is three-fold. First, it shows the strength and dignity of the merciful, i.e. he or she does not need to inflict pain on the other person. Second, it shows that he or she understands human vulnerability, i.e. that humans do err. Third, it is socially useful because it triggers trust rather than fear (Nussbaum 2008: 365–366). Mercy is seen as an act of good will (which is cognitive in scope), rather than an act of compassion (which is affective in scope).

On the other hand, the anti-compassion view avoids the problems the procompassion view has such as the problem of misplaced compassion, the problem of blameless suffering, the problem of social and ethnic diversity, the problem of other species. Furthermore, it avoids undeserved self-sufficiency. Since the anticompassion view sees compassion as being wrong or amoral, compassion is not really worth discussing further. The main problem with this view is that it does not hold, except within extremely controlled societies and within extremely controlled or idealized parts of a society or in an artificial society. One reason is that its underlying trait, empathy, in its basic form (low-level empathy), is innate in the mammal kingdom (or at least should be – nature is not perfect), for the sake of survival of the species. I defined low-level empathic behaviour as comprising emotional contagion and biological altruism,² which are more or less primitive and/or involuntary (Runehov 2012: 412). This means that in real-life situations we do feel with the less fortunate, the ones in need.

Let us now take a look at the problems of the pro-compassion view, which are misplaced compassion, blameless suffering, ethnic diversity and undeserved sufficiency.

I had a personal experience of misplaced compassion. One morning some years ago, while I was waiting for the bus I could not help feeling very compassionate towards a woman sitting on the bench in the bus-stop. She was dirty, her clothes were in rags, and her only luggage was an old plastic bag where she kept whatever she had. Then she pulled a half-eaten sandwich out of the bag, which did not look fresh. Since I had a 100 kronor note in my pocket, I gave it to her in a very discrete manner (even though there was nobody around), telling her it was for a good meal. She looked at it and threw it in my face, calling me a rich bitch, and many other names. I was saved from more embarrassment by the arrival of the bus. I was shaky, ashamed and wished I had never met that woman. The lesson I learned is that compassion is not about what you feel towards another person, it is more about what they want or do not want from you. Instead of relieving a person's pain, your compassionate act may actually accumulate the pain. The sufferer may not see herself as suffering, and may see you as an intruder.

The second problem, blameless suffering, is a very complex problem, which cannot be solved by philosophy alone. However, it is extremely important. We are all convinced that rape is wrong, that the offender has to be punished and the victim to be helped. Nevertheless, too many times when a woman reports having been raped, she is told that she brought this onto herself, by (for example) walking alone in a dangerous street, being dressed in a provocative manner or having drunk some alcohol. However, men may also become victims of rape, as a matter of fact, an article written by Hanna Rosin shows that (at least in the USA) there is no significant difference between male and female statistics on rape (Rosin 2014). The outcome is different though, very different. In a report on conviction rates for sexual offences in the UK, 2011, one can read that '60 % of court proceedings in 2011 involving

²Biological altruism is evolutionarily innate and is shared by humans as well as other species. It is involuntary and concerns the act of offering oneself for the fitness and survival of the species. It differs from how we usually understand altruism, which means that an action is altruistic only if it is done with the conscious intention of helping another being. There is no such requirement in the biological sense. In Runehov 2012, I also included compassion in low-level empathy, but I later realized that compassion is better understood as the bridge between low- and high-level empathy. The reason for why I changed my mind is that compassion has an instinctive, affective component as well as a cognitive one.

sexual offences resulted in a conviction, with sexual assault on a male achieving the highest rate (91 %) and rape of a female the lowest (39.7 %)'.³ According to Lara Stemple, 'feminism has fought long and hard to fight rape myths – that if a women gets raped it's somehow her fault, that she welcomed it in some way' (Stemple and Meyer 2014; Rosin 2014). That this does not seem to be the case for men is according to her that violence against men is seen as aberrant. Compassion seems to be a finite resource, which it is not. Also persons who put themselves into trouble because of drug or alcohol abuse are regarded as blameless. This situation, it is argued, is brought upon them through no fault of their own. Indeed it is the society, or parents, that are to blame for this misery. The demand for blameless calamity, Martha Nussbaum argues, is human, not animal. Animals simply register suffering and comfort the one in need, with no questions asked, so to speak (Nussbaum 2014: 123–150). Animal compassion is simple (instinctive and involuntary) and therefore it works. Human compassion is complex (affective and cognitive) and might therefore be corrupt.

The third problem concerns social and ethnic diversity. When Rousseau says that the rich do not help the poor due to the difference in their social class or difference of possibilities, he does not mean that this is always the case. However, this is a serious problem because in real life, and unfortunately in too many cases, poor people, if regarded at all, are regarded as less valuable. It is similar with people belonging to another ethnic group. It is perhaps needless to say that our world today gives witness of such discrimination. Again this is a very complex problem that cannot be solved by philosophy alone. The question why people help the ones closest to them might in part be explained in evolutionary terms. For example, emotion in early prehistory evolved in the emotional motivation to help others within the tribe. However, in my opinion, this reason is insufficient. Environmental, cultural, religious and educational traits are in play as well, as are traits such as greed, pride, self-sufficiency, etc. For instance, a study on beliefs about the causes of poverty by Matthew O. Hunt shows that belief of what causes poverty is culturally related. Indeed, in comparing the beliefs about the causes of poverty of Black, Latino and White individuals, Hunt observed that Latinos are more likely than whites to view both individualistic and structural explanations for poverty as important causes (Hunt 1996). Obviously, what you belief to be the cause of the poverty of your compatriots will influence whether or not you will feel compassionate or not, which in turn will influence your decision whether to help or not.

With this we have come to the last problem I want to highlight, namely undeserved sufficiency. People become more and more satisfied with 'feeling' compassionate, without actually doing something that might put them in difficulties and sacrifice (Nussbaum 2008: 399). We see this on a daily basis. Take for example all the charity programs where people are encouraged to donate some money for the cause. Also, how many times are we encouraged to 'like' and 'share' certain pages on Facebook? Furthermore, we are confronted with a variety of advertisements of

³ http://www.theguardian.com/news/datablog/2013/jan/11/male–female-rape-statistics-graphic (accessed 5 May 2015).

charity organizations showing us how miserable our world is. Exhausting this vulnerable human feature might unfortunately lead to undeserved self-sufficiency (I have donated ...) or to neglect (I find it difficult to choose what to support).

Evaluation

Even though there is much more to be said and evaluated. I think it is correct to say that none of the compassion views is sufficient to make the human world a better place to be. The problem is that these views seem to neglect the affective component of compassion. Still, this component plays an important role, whether or not it is highlighted. Indeed, especially in the analyses of the pro-compassion view, the role of emotions becomes apparent for good or worse. For example, while not outspoken, emotions play an important role when deciding whether a person brought her calamity upon herself or not (e.g. the 'poor' raped man and the 'careless' raped woman). We also see emotions acting when people donate to a case close to their heart (e.g. cancer research) but walk by a person begging on the street. Perhaps Daniel Batson's distinction between empathy-induce altruism and moral motivation can be of help to explain why humans will show compassion in some cases while not in others. According to him, only when empathy-induced altruism (the affective component) and moral motivation (the cognitive component) cooperate, the Golden Rule is applied. The Golden rule comes in two versions, a direct and a cautionary one. The former version dictates that one should always treat others in ways that one would like to be treated. The latter version says that one should NOT treat others in ways that one would NOT like to be treated. However, if empathy-induces altruism and moral motivation are in conflict, people may neglect or resist helping others (Batson 2014: 43–58). In reality this might imply that for a male judge having to decide whether to convict a perpetrator who rapes a man, these psychological functions cooperate and the perpetrator gets his/her verdict. The male judge might feel emotionally closer to the victim, because he has the same gender as himself. In other words, he can put himself in the victim's mental shoes easily. This is due to the Theory of Mind (ToM). Philosophically, the ToM commonly refers to the capacity to attribute mental states, i.e. beliefs, intents, desires, pretending, knowledge, etc., to oneself and others, and to understand that others may have beliefs, desires and intentions that are different from one's own. Philosophically, we attribute mental states to ourselves and others by way of analogical inference. Roughly explained, the analogical inference principle is the idea that other human beings are 'very like me'. In the language of logic, we induce the other from ourselves. Simply put, x observes y, y is like x, hence x understands y. However, if the victim is a woman, a species of the other gender, these psychological functions might (but need not) conflict and the perpetrator might go free. It is similar when compassion concerns social and ethnic diversity. You will easily feel compassion for a colleague you work with every day, because not only have you learned to know this person but you also share experiences. You almost know that person as you know yourself. It is different when the calamity concerns a person living in another part of the country with whom you never shared anything. However, suppose this person is a researcher like you, you might feel and even show compassion, because, once again, you recognize yourself. To put it in the words of Martha Nussbaum, 'humans may show true compassion in cases that emotionally remind them of things that matter for them' (Nussbaum 2014: 123–150). We can make the list much longer in order to show that the affective component of compassion plays a crucial role in deciding whether or not to act compassionately, for good or for worse.

Conclusion

Compassion is a tricky issue. The most tricky part seems to be its affective component which (under normal neurological preconditions) cannot be avoided. The anticompassion as well as the pro-compassion views try to avoid the influence of emotions. The anti-compassion view does this by ignoring compassion all together, while the pro-compassion view accepts compassion but notes that it may become selective, calculated and misguiding. However, even without emotions, this view becomes corrupt, because of an excessive claim of worthy compassion. In reality, this does not work. The cognitive and affective components of compassion belong together. Inspired by Daniel Batson, I would say that when these components cooperate, the Golden Rule may be applied. I do not say that this will always be the case. Besides neurological preconditions (having the ToM and no neural deficiencies), factors such as culture, religion, education and politics seem to have a voice as well. Many scholars and scientists have studied compassion. Nevertheless, I believe we are only seeing the tip of the iceberg. The question is, what lies underneath?

Bibliography

- Batson, D. C. (2014). Are the 'principles in his nature, which interest him in the fortune of others', moral? In H. Putnam, S. Neiman, & J. P. Schloss (Eds.), *Understanding moral sentiments*. *Darwinian perspectives*? (pp. 43–58). London/New Brunswick: Translation Publishers.
- Davies, O. (2001). A theology of compassion. Cambridge: SCM-Canterbury Press.
- Hauser, M. (2006). *Moral minds: How nature designed our universal sense of right and wrong*. New York: Ecco Press.
- Höffe, O. (2000). Immanuel Kant. Stockholm: Thales.
- Hunt, M. O. (1996). The individual, social, or both? A comparison of Black, Latina, and White beliefs about the causes of poverty. *Oxford Journals Social Forces*, 75(1), 293–322.
- Kant, I. (2004 [1781]). Kritik av det rena förnuftet (J. Emt, Trans.). Stockholm: Thales.
- Kant, I. (2009). *Religion within the bounds of bare reason* (W. S. Pluhar, Trans.). Indianapolis: Hackett Publishing Company.
- Nussbaum, M. C. (2008). Upheavals of thought: The intelligence of emotions. Cambridge/New York: Cambridge University Press.

- Nussbaum, M. C. (2014). Compassion: Human and animal. In H. Putnam, S. Neiman, & J. P. Schloss (Eds.), Understanding moral sentiments. Darwinian perspectives? (pp. 123–150). London/New Brunswick: Translation Publishers.
- Putnam, H., Neiman, S., & Schloss, J. P. (Eds.). (2014). Understanding moral sentiments. Darwinian perspectives? London/New Brunswick: Translation Publishers.
- Rosin, H. (2014, April 29). When men are raped. *Doublex*. http://www.slate.com/articles/double_x/ doublex/2014/04/male_rape_in_america_a_new_study_reveals_that_men_are_sexually_ assaulted.html. Accessed 5 May 2015.
- Runehov, A. L. C. (2012). Imago Dei and simulation or Imitatio Dei: A philosophical essay on empathy. *Theology and Science*, *10*(4), 411–430.

Schopenhauer, A. (1992). Världen som vilja och föreställning (E. Skölds, Trans.). Nora: Nya Doxa.

Stemple, L., & Meyer, I. H. (2014). The sexual victimization of men in America: New data challenge old assumptions. *American Journal of Public Health*, 104(6), 19–26.

Anne Runehov has a Reader (Associate Professor) degree in Philosophy of Religion from Uppsala University (2011) and currently works as an independent researcher and author. She took a Doctorate in the Philosophy of Religion at Uppsala University (2004), and a Masters degree in Theoretical Philosophy, majoring in Philosophy of Mind, at the same university (1999). She is Editor in Chief of the *Encyclopedia of Sciences and Religions*, Springer 2013. Besides other editorial duties, she is co-editor for the ISR series (2014–). She received the 2006 ESSSAT research prize for her work on neuroscience and religion. In addition to her book *Sacred or Neural* (Vandenhoeck & Ruprecht 2007), she has published several articles and chapters.

Part II Reflections on Emotions from the Sciences

Chapter 8 From Vicarious Actions to Moral Behavior

Christian Keysers and Valeria Gazzola

Abstract Humans are highly social animals. The capacity to feel the inner states of others is important for human beings: it allows us to cooperate more effectively, and gives an edge in the competition between individuals. The aim of this paper will be to review some of the core empirical evidence for how our brain allows us to perceive the inner states of others. We will first review some of the core evidence for the fact that observing the actions of others recruits activity in neurons and brain regions involved in performing similar actions. We will then review evidence showing that viewing other individuals being touched, performing actions or experiencing bodily pain recruits brain regions involved in experiencing similar states. We will then review evidence for how we share the emotions of others, how this system is dysfunctional in psychopathic criminals, and how that suggests a separation between our ability for empathy and our propensity to use that ability. Finally, we will speculate about the relationship between the neural mechanisms for empathy that we have reviewed, and moral behavior.

Keywords Empathy • Neuroimaging • Morality

Mirroring the Actions of Others

The premotor cortex of the monkey was long known to control the monkey's own actions. Neurons in this part of the cortex fire when the monkey prepares to perform certain actions, such as grasping a piece of food, for instance. Interestingly, about 10 % of these neurons, called mirror neurons, also fire when the monkey is not performing any actions, but hears or sees others perform similar actions (Gallese et al. 1996; Keysers et al. 2003). What makes this phenomenon interesting is that neurons in the premotor cortex are part of the monkey's own motor vocabulary and, indeed, electrostimulating this part of the brain causes the monkey to perform actions,

C. Keysers (🖂) V. Gazzola

Social Brain Lab, Netherlands Institute for Neuroscience, Amsterdam, The Netherlands

University of Amsterdam, Amsterdam, The Netherlands e-mail: C.keysers@nin.knaw.nl

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_8

evidencing the role of these neurons in action control (Graziano et al. 2005). That these neurons also respond when perceiving the actions of others alerts us to the surprising fact that the motor cortex plays a role in perceiving the actions of others. The monkey does not simply 'see' what others do, the monkey's brain automatically adds a motor representation of what it would take to do the observed action to the sensory descriptions of what the action looks or sounds like. One might speculate that with such vicarious motor activations, i.e. activations of the motor system in the stead of the perceived individual, the observer feels what it would be like to do the action he observes.

Most of us, however, are not interested specifically in how the monkey brain works. We want to know whether the human brain also activates its own actions while perceiving the actions of others. The dominant methodology has been to use functional magnetic resonance imaging (fMRI). fMRI takes advantage of the fact that if we activate neurons in the brain, the vascular system reacts by increasing blood-supply to that part of the brain. This changes the ratio between oxygenated and deoxygenated blood in that part of the brain. Because deoxygenated blood perturbs the magnetic field of the magnetic resonance imaging scanner, while oxygenated blood does not, brain activity then indirectly alters the signal measured in fMRI, and becomes measurable.

We can then measure brain activity while a participant performs an action and while viewing others perform similar actions, and discover that also in the human brain, observing the actions of others not only causes activity in brain regions associated with vision, but also in brain regions involved in performing similar actions (Gazzola and Keysers 2009). These vicarious motor activations involve the premotor cortex (dorsally and ventrally), i.e. the brain region in which recordings in monkeys had revealed neurons that respond both during action observation and execution. However, they are also found in the somatosensory cortex (see below), the inferior parietal lobule and the cerebellum. Conspicuously, the primary motor cortex is not normally activated while viewing the actions of others. The primary motor cortex is the part of the cortex most directly controlling our muscles, while the premotor cortex is a region involved in motor planning, which then triggers activity in the primary motor cortex to execute planned motor actions.

The fact that during action observation, the premotor cortex but not the primary motor cortex is activated, while during action execution both are activated, explains why we do not automatically imitate all actions we observe. We internally simulate the observed actions at the level of motor plans in the premotor cortex – sometimes also called motor intentions, i.e. what it takes to achieve a goal – without acting out the observed and simulated action through recruitment of the primary motor cortex. Under some conditions, however, the primary motor cortex is also recruited during action observation – imitation being the most prominent of these cases. Cases in which we very intently watch the actions of others can reveal overt motor outputs. This can be seen in football fans who will perform a small kick with their foot while observing their favorite players kick a goal, or in chimpanzees moving their arms up

and down while observing other chimpanzees crack nuts (Marshall-Pescini and Whiten 2008).

The sound of actions also induces activity in brain regions involved in performing similar actions (Gazzola et al. 2006), and more empathic individuals, based on self-report questionnaires, activate brain regions involved in performing an action more than less empathic individuals (Gazzola et al. 2006). These individual differences suggest that vicarious motor activations are related to what we call empathy in everyday life.

The fact that we activate our own motor system while viewing the actions of others provides our brain with otherwise hidden information. The intentions of others are not visible states that we can simply 'see'. They are variables hidden inside the brain of others. Nevertheless, while we see a child stretching to reach for a jar of cookies on a high shelf, we cannot help but 'feel' his intention. Vicarious motor activations can provide a way to feel the hidden intentions of others. We know that electrostimulating the parietal or premotor cortices can evoke a conscious sense of intention (Desmurget et al. 2009). Hence, the vicarious activation of these regions while viewing the actions of the child could be key to experiencing the intentions of others.

It is important to specify that we do not directly experience the intentions of others: we rather project the kind of intentions we would feel if acting in this way on the target of our observation. This becomes flagrantly clear in an experiment in which we had participants observe both humans and robots perform actions. When we observe a human grasp a glass, we activate vicariously premotor and parietal regions that resemble those of the person who actually performed the actions (Gazzola et al. 2007). In a way, our brain thus approximately mirrors the inner states of the actor. Indeed, using pattern classification, we can show that even the pattern of activity is similar in the two brains (Etzel et al. 2008). Because our own brain activity while performing the observed task is very similar to that of the fellowhuman who performed the action, it is actually difficult to decide whether the vicarious motor activity is a reflection of the actual activity of the other, or a projection of what our own brain activity would be like if we had acted in that way. However, when we witness a robot perform such actions, we activate the same motor and parietal regions we would activate if we performed a similar action (Gazzola et al. 2007). The 'brain' activity of the robot, implemented by silicon semiconductors in a CPU, bears no resemblance to the pattern of neural activity in the observer. In this case, it becomes clear that vicarious motor activations represent what the observer's brain activity would be if acting in the observed way, rather than a direct reflection of the brain activity of the observed agent. Vicarious motor activations are, then, more generally only as accurate a reflection of the brain activity of the observed agent as the observer's brain resembles the observed brain. Projection is a heuristic to read the hidden states of other people's brains that will only be as accurate as the observer is similar to the observed.

Hebbian Learning and Predictive Vicarious Motor Activations

In this section we will examine in more detail what is actually meant by 'Hebbian learning'. We will first present a relatively straightforward account of how doing and seeing an action become associated through Hebbian learning. We will then delve a little deeper into the details of the process to show how Hebbian learning brings about a form of predictive, active coding. This somewhat technical part is important, as it will demonstrate that our brain not only associates, reactively, our own motor programs with the actions we see others perform. Instead, our brain seems to permanently predict what others will do, and our representation of others is then an active prediction, a working hypothesis, rather than a passive reflection.

Historically, the term Hebbian learning derives from the work of Donald Hebb (1949) who proposed a neurophysiological account of learning and memory based on a simple principle: 'When an axon of cell A is near enough to excite a cell B and repeatedly or persistently takes part in firing it, some growth process or metabolic change takes place in one or both cells such that A's efficiency, as one of the cells firing B, is increased' (p. 62). The elegance of this principle is that it is neurobiologically plausible because it is spatially and temporally local: it makes no reference to states of the brain that occur outside of a given synapse or outside of the temporal horizon that a synapse can integrate. A careful reading of Hebb's principle unravels his visionary understanding of the importance of causality and consistency. He writes not that two neurons need to fire together to increase the efficiency of their connection, but that one neuron needs to repeatedly (consistently) take part in firing (causality) the other. Some (but not Hebb himself) have paraphrased his principle in a rhyme: 'what fires together, wires together'. While mnemonic, one should never take this summary literally, as it would miss the importance of causation in Hebb's actual work: if two neurons literally fire together, i.e. at the same time, the firing of one cannot have caused that of the other. Temporal precedence, rather than simultaneity, is the signature of causality (Granger 1969), and would indicate that 'one took part in firing the other'.

At about the same time mirror neurons were discovered, neurophysiologists laid the foundation for our modern, neurophysiological understanding of Hebbian learning based on spike-timing dependent plasticity (STDP) (Bi and Poo 2001; Caporale and Dan 2008; Markram et al. 1997). Experiments in which two connected neurons were stimulated with various stimulus onset asynchronies evidenced an asymmetric window of STDP (Fig. 8.1a). When an excitatory synapse connects onto an excitatory neuron, if the presynaptic neuron is stimulated 50 ms or less prior to the postsynaptic neuron, the synapse is potentiated. In contrast, if the presynaptic neuron is stimulated just after the postsynaptic neuron, the synapse is depressed. If the two neurons simply fire together, the inevitable temporal jitter would make the presynaptic neuron sometimes fire just before and sometimes just after the postsynaptic neuron, and potentiation and depression would annul each other over time, leading to no substantial net STDP. As Hebb had predicted, causation is thus key to synaptic plasticity.


Fig. 8.1 For details, see text

Other experiments have refined our understanding of the consistency required for synaptic plasticity. Bauer et al. used a standard STDP protocol, with the presynaptic neuron stimulated 5–10 ms prior to the postsynaptic neuron (Bauer et al. 2001). They then compared cases in which the post- and pre-synaptic stimulation were always paired (10 times), against cases in which the same protocol was repeated, but half way between each of the paired stimulation, only the postsynaptic neuron was depolarized (unpaired). The former case is a repeated and contingent stimulation, the later repeated but non-contingent. Robust STDP was observed only in the former, contingent case. STDP is therefore dependent, not only on how often neuron A takes part in stimulating neuron B, but also how predictive the firing of neuron A is of the firing of neuron B. This need for contingency in STDP fleshes out what Hebb intuitively described as 'repeatedly and persistently' and echoes the laws of associative learning, in which a conditioned and unconditioned stimulus become most strongly associated if the conditioned stimulus predicts the occurrence of the unconditioned stimulus (Rescorla 1967).

In the light of these findings, 'Hebbian learning' in contemporary neurophysiology refers to the rapidly expanding understanding of STDP (Bi and Poo 2001; Caporale and Dan 2008) inspired by Hebb's work and emphasizes the sensitivity of STDP for tight temporal precedence (causality) and contingency.

Mirror neurons were initially described, and are best studied, in the monkey in the ventral premotor (PM; area F5 (Gallese et al. 1996; Keysers et al. 2003; Kohler et al. 2002; Umilta et al. 2001)) and inferior posterior parietal (area PF/PFG (Rozzi et al. 2008)) cortices. Neurons in these two regions are reciprocally connected (Rozzi et al. 2006). Neurons in area PF/PFG are also reciprocally connected with neurons in the superior temporal sulcus (STS (Nelissen et al. 2011; Rozzi et al. 2006)), a region known to respond to the sight of body movements, faces, and the sound of actions (Keysers and Perrett 2004). It is now evident that other brain regions contain mirror neurons as well (Caspers et al. 2010; Keysers and Gazzola 2009; Mukamel et al. 2010), but to illustrate how mirror neurons might emerge, a simple system encompassing only two nodes, STS and PM, suffices. First, we will adopt a relatively coarse temporal resolution of about 1 s for a first approximation of how mirror neurons arise. We will then look at a finer time-scale, which will reveal how mirror neurons could organize into a dynamic system that generates active inferences.

Hebbian Learning and Mirror Neurons at the Second Time-Scale

In the newborn human and monkey baby, we know little about the selectivity of the relevant neurons and their connections. Accordingly, we will assume relatively random bidirectional connections between neurons in the STS that respond to the vision and sound of different actions and neurons in PM that code for the execution of similar actions.

When an individual performs a new hand action, it sees and hears itself perform this action. We will call the sensory input that results from an action 're-afference'. The tendency of babies to stare at their own hands, encourages and canalizes this re-afference (Del Giudice et al. 2009). As a result, activity in PM neurons triggering a specific action, and activity in neurons responding to the sound and vision of this specific action in the STS, will, to a first approximation, consistently and repeatedly overlap in time. For instance, a grasping neuron in STS will have firing that will consistently overlap in time with the activity of PM grasping neurons while the individual observes himself grasp. Throwing STS neurons, on the other hand, will have firing that consistently overlaps in time with that of throwing PM neurons while the individual observes himself throw. However, the firing of STS grasping neurons will not systematically overlap in time with that of PM throwing neurons and vice versa. Accordingly, re-afference will create a situation in which the firing of STS and premotor neurons for the same action will correlate more frequently than those for two different actions. There is contingency in the firing of the neurons representing the same actions across brain regions. At this macroscopic time-scale, Hebbian learning would thus suggest that matching connections, i.e. between STS and PM neurons coding the same action, should be reinforced, while non-matching connections should not.

After repeated re-afference and the Hebbian learning that it will cause, the prevalent connections should be matching. This pattern of connection then represents a memory of the sensorimotor contingencies that individual has experienced in his life. If the individual then hears someone perform a similar action, the sound of the action, by resemblance to the sounds that were associated with his past actions, would activate STS neurons that would trigger, through the potentiated synapses, matching PM neurons. The PM neurons would become mirror neurons. In a way, this process would be a re-collection of past procedural memories of what motor state occurred together with these sensory events, but one that is activated through an external stimulus. The same would apply if the individual sees someone else perform a similar action, by virtue of the relative viewpoint-invariance of some of the neurons in STS (Keysers and Perrett 2004).

The connections from PM neurons back to STS seem to have an inhibitory effect (Hietanen and Perrett 1993, 1996). The overlap in firing between PM and STS would also potentiate the matching connections amongst these backward connections, and help explain the fascinating phenomenon that we encode those sensory events that we cause ourselves less vividly. For instance, it is extremely difficult to tickle yourself, whilst the same kind of touch, performed by someone else, can be very ticklish. Similarly, the execution of a specific action can reduce the firing of those neurons that respond to the sight and sound of the action that was produced (Keysers 2011; Keysers and Perrett 2004).

Beyond self-observation, many other situations can generate similar contingencies between matching STS and PM neurons (Keysers and Perrett 2004) that would 'wire-up' mirror neurons. One of them is being imitated. We cannot see some of the actions we can perform (e.g. facial expressions). However, parents are avid imitators of the facial expressions of their babies, and babies experience numerous instances of imitation in their face-to-face interactions with their parents (Jones 2009). Accordingly, responses in STS neurons coding specific facial expressions of their parents will overlap in time with motor neurons triggering the matching facial expressions, and would reinforce connections between neurons in STS and those in motor structures that have matching selectivities. In this sense, parents' striking motivation to imitate the facial expressions of babies could serve to provide babies with the right kind of experiences to develop mirror neurons (Del Giudice et al. 2009). Because there is relatively little evidence that babies are able to reliably imitate many facial expressions at birth (Anisfeld 1991; Cook et al. 2014; Jones 2009) (tongue protrusion being a notable exception), it is unlikely that the capacity to imitate facial expressions is entirely genetically prewired (although some genetic prewiring for specific emotions might exist). Instead, something like the propensity to engage in imitation when in front of a baby, rather than the capacity to imitate, is what might be predetermined by genetics and evolution (a hypothesis that could be tested by measuring the heritability of the tendency to imitate infant facial expressions). Through this parental propensity, evolution could indirectly but specifically favour the formation of mirror neurons for facial expressions, even if Hebbian learning per se certainly does not exist for the purpose of creating mirror neurons.

Because babies hear themselves cry or laugh, and the cry and laugh of others (in particular other babies) will sound similar, auditory mirror neurons for these emotions could emerge robustly even when deprived of parental imitation. This auditory matching might be particularly important for spoken language. During babbling, a baby creates contingencies in the firing of premotor neurons triggering the pseudospeech, and neurons in the temporal lobe responding to such speech. Once the synaptic connections have been trained by its own babbling, hearing a parent speak could trigger the motor programs to replicate the words (Keysers 2011). This process would be assisted by the fact that parents change the tone of their own speech to be more similar to that of the baby (motherese (Falk 2004)). Here, the crosscultural tendency of parents to motherese and the tendency of babies to babble would canalize the emergence of appropriate articulatory mirror neurons.

An important prediction of this Hebbian account of the emergence of mirror neurons is that it would predict that mirror neurons could readily emerge for actions that are evolutionarily novel. Ample evidence now exists for this prediction. People who have never played the piano, for instance, only activate their auditory cortex while listening to piano music (Lahav et al. 2007). A few hours of piano playing, during which activity in PM neurons triggering the key-presses approximately overlap with activity in STS neurons responding to the sound of piano, suffice to modify the brain so that activity in the PM cortex can thereafter be triggered simply by listening to the piano melody (Engel et al. 2012; Lahav et al. 2007).

How Sensorimotor Delays Transform Mirroring into Predictive Coding

However, a key feature of our modern understanding of Hebbian learning is its exquisite sensitivity to the fine temporal relations of pre- and post-synaptic activity. Examining re-afference at this millisecond time scale extends our understanding of mirror neurons. If you think of a complex action, like reaching for a cookie, grasping it, then bringing it to the mouth, in the world, the action and its sensory consequences coincide nicely in time (Fig. 8.1b). However, it takes ~100 ms for premotor activity to trigger complex overt actions like reaching and grasping (Graziano et al. 2005). It then takes another 100 ms for the sound/vision of that action to trigger activity in the STS (Keysers et al. 2001). This will therefore shift the spiking of neurons representing the vision and sound of an action in STS by ~200 ms relative to that of the premotor (PM) neurons that triggered the action (Fig. 8.1c). Hence the macro-temporal notion that activity in the STS neurons for an action overlap in time with that of the PM neurons that trigger the action is actually an oversimplification. This has consequences for Hebbian learning, because STS responses to the sight of reaching no longer precede/predict activity in PM neurons for reaching. The opposite is closer to the truth: PM neuron activity predicts STS neuron activity, and should thus lead to Hebbian learning only in the (inhibitory) $PM \rightarrow STS$ direction. In the STS \rightarrow PM direction, the firing of neurons in STS responding to a particular phase of the action (e.g. reaching) precede PM neural activity triggering the next phase (e.g. grasping), and we would thus expect Hebbian learning to reinforce predictive rather than matching connections, with STS reaching neurons connecting with PM grasping neurons. Some Hebbian learning might still occur within a given action phase, because early spikes of the STS reaching neurons will occur just before late spikes of the PM reaching neurons, but much of the Hebbian learning would be predictive in nature, simply due to the temporal asymmetry of STDP (Fig. 8.1a), and the known latencies in the sensory and motor system (Fig. 8.1c, d). Note that the amount of prediction performed by the synapses between STS and PM would be directly proportional to the difference in response onset of the two regions, \sim 200 ms in this case.

When adopting a more fine-grained temporal perspective, acknowledging the latencies in the sensorimotor system, and the reciprocity of connections between PM and STS, Hebbian learning thus leads to the emergence of an intriguing dynamic system (Fig. 8.1e). Re-afference leads to the potentiation of inhibitory connections from PM \rightarrow STS, that inhibit the sensory consequences of a particular movement phase whenever PM neurons trigger that action. Re-afference also potentiates predictive excitatory connections, which make STS neurons trigger the representation of upcoming actions in PM. The expectations are then sent backwards as inhibitory signals. If the expectation matches the incoming sensory signal, no STS activity will be canceled, and the brain then no longer perceives the world directly, but its hypotheses about the world. If the predictions are incorrect, STS activity is not canceled, and the information flow from STS \rightarrow PM then becomes a prediction error that will update the hypotheses.

At this temporal resolution, by virtue of Hebbian learning, the entire STS-PM loop becomes a dynamic system that performs predictive coding (see Friston et al. 2011 for a conceptually similar model based on free energy). When the observed action unfolds entirely as expected, activity in the PM would actually be generated using the sequences of normal motor control rather than by visual input.

Evidence for these predictions of Hebbian learning is still rare but is starting to emerge. The predictive nature of the PM response is evident from the fact that images of reaching increase the excitability of muscles involved in the most likely following action phase, grasping (Urgesi et al. 2010). The possibility that PM activity can be driven by internal predictions in the absence of explicit visual input comes from the observation that mirror neurons that respond during the execution of grasping respond to the sight of reaching behind an opaque screen (Umilta et al. 2001) and that auditory mirror neurons that respond to the cracking sound of a peanut being shelled start firing ahead of this phase when viewing the hands grasping the peanut (Keysers et al. 2003). Evidence that predictions from PM \rightarrow STS cancel out predicted actions, and thereby silence the STS \rightarrow PM information flow if, but only if, the actions are predictable (Fig. 8.1e), stems from the fact that the predominant direction of information flow is from the PM \rightarrow STS when observing predictable actions, but STS \rightarrow PM when observing the unpredictable beginning of an action (Schippers and Keysers 2011).

Vicarious Somatosensation

There is clearly more to empathy than sharing the actions of others. When we see a spider crawl on James Bond's chest in Dr No, we can almost feel the tingling on our own chest. One of the exciting discoveries of the last decade has been the generalization of the principle of mirror neurons to domains outside the motor system. The first evidence for mirror-like neurons within the somatosensory system - something we will call vicarious touch representations, i.e. feeling touch in the stead of another - came from an fMRI experiment in which we showed movies of other people touched on their legs to participants. We later touched the same participants on their legs, to localize the brain regions involved in feeling touch on one's own body. What we observed was that seeing touch activated regions of the secondary somatosensory cortex (S2) that were also activated when the participants were themselves touched on the leg (Keysers et al. 2004). Hence, we not only activate neural representations of our own actions while we view those of others, but also representations of our own touch when seeing others touched. Vicarious activations in S2 were confirmed by two studies that showed participants hands being touched (Ebisch et al. 2008; Schaefer et al. 2009).

Interestingly, the sight of objects being touched led to similar activations (Keysers et al. 2004) just as seeing an act recruits our own motor system, further supporting the notion that vicarious activations in the brain represent a form of projection, in which we recruit the state we ourselves experience in a situation when witnessing others in that situation, projecting our own hidden inner states onto these individuals.

We also scanned participants while they viewed objects being manipulated and while they later manipulated similar objects themselves. We analyzed the data of each subject separately without smoothing to avoid spurious overlaps between action observation and execution (Gazzola and Keysers 2009). We found that vicarious activations were not restricted to the ventral premotor cortex and the posterior parietal lobe: Brodmann area 2 (BA2) was also vicariously activated. BA2 is one of the four subdivisions of what is called the primary somatosensory cortex (SI), and is specialized in active touch. If you look for your car keys in your pocket, what you do is not simply sense what touches your finger. You integrate the changing sensations on your fingers with the changes in the position of your fingers while you move your hand around your pocket. This combination of position of the hand and touch is what BA2 does. It thus makes perfect sense that this very region is vicariously activated while you see others manipulate objects. Reviews confirmed that BA2 is consistently active during action observation – as consistently as the ventral premotor cortex (Caspers et al. 2010; Keysers et al. 2010). In contrast to BA2, more anterior sectors of the SI are rarely and only weakly recruited during the observation of other people's actions (Keysers et al. 2010). Hearing the sound of other people's actions also activates BA2 (Gazzola et al. 2006; Ricciardi et al. 2009). Monkeys also increase their glucose uptake in SI and S2 when seeing grasping (Evangeliou et al. 2009; Raos et al. 2004, 2007).

In summary, vicarious activations in BA2 show that the perception of the actions of others involves simulating the *somatosensory input* that would accompany performing similar actions in addition to simulating the *motor output* that would be necessary for performing the observed action.

Vicarious Emotions

Most people immediately think of emotions when they think of empathy. A whole body of evidence now suggests that we also vicariously activate brain regions involved in our own emotions while we witness the emotions of others.

In the first experiment that showed that we have vicarious activations for the emotion of others, we showed that the anterior insula, a brain region activated when participants themselves experience disgust triggered by unpleasant odours, was also activated when viewing the disgusted facial expressions of others (Wicker et al. 2003). Later, we showed that these vicarious activations of the insula are stronger in more empathic individuals (Jabbi et al. 2007). Interestingly, electrostimulations of the insula in epilepsy patients trigger bodily feelings: unpleasant smells and tastes or even retching (Penfield and Faulk 1955). This shows that what is vicariously activated when we witness the disgust of others is not a simple, abstract thought of disgust, but rather an embodied representation, a gut feeling, of what disgust feels like. Another important observation is that lesions in the insula can lead to the loss of both the capacity to experience disgust, and the capacity to recognize disgust in others (Calder et al. 2000), supporting the notion that vicarious activations are necessary for understanding these emotions in others.

We have all also experienced that witnessing the pain of others can hurt. Singer et al. showed that the affective brain regions involved in our own pain (the anterior insula and rostral cingulate cortex) can be vicariously triggered when participants know that someone is in pain (Singer et al. 2004, 2006). The magnitude of vicarious activation also correlated with self-report empathy questionnaires linking these vicarious activations to empathy. A large number of studies have replicated these findings (Lamm et al. 2011). Witnessing a range of other emotional facial expressions including disgust (Jabbi et al. 2007; Wicker et al. 2003) or happiness (Jabbi et al. 2007) also triggers vicarious activation in regions involved in experiencing these emotions, including the insula (van der Gaag et al. 2007). Even witnessing other people receive reward vicariously recruits striatal regions involved in experiencing reward (Mobbs et al. 2009; Monfardini et al. 2013). And witnessing gentle affective touch vicariously recruits posterior insular regions (Morrison et al. 2011). In addition to vicarious motor and somatosensory activations, our brain thus also transforms the emotions of others into vicarious emotional activations (Bastiaansen et al. 2009; Keysers and Gazzola 2009).

Experiments in which participants viewed specific body parts being hurt however reveal that the sight of and/or attention to localized somatic pain can reveal the interaction between somatosensory and emotional vicarious activations. Seeing a hand pricked (Costantini et al. 2008; Lamm and Decety 2008; Lamm et al. 2007, 2010; Morrison and Downing 2007; Morrison et al. 2004) or a foot hit by a door (Jackson et al. 2005, 2006), for instance, triggers activity not only in affective brain regions thought to provide us with the unpleasantness of our own pain (anterior insula and rostral cingulate cortex), but also with brain regions thought to provide us with a localized sensation of pain (in the primary and secondary somatosensory cortices). In this mosaic of responses, vicarious SI/S2 activity could then convey a quantitative and localized sense of pain during social perception in addition to the *unpleasantness* conveyed by vicarious activations in the anterior insula and rCC (Keysers et al. 2010; Lamm et al. 2011).

Modulations of Vicarious Activations

So far, we have presented a panoply of evidence for the fact that while we witness the actions, sensations and emotions of others, we vicariously activate our own actions, sensations and emotions. This draws the picture of an empathic brain, that puts itself in the shoes of those it observes. A positive message is that these mechanisms are set in motion spontaneously, while we witness what happens to others. In our experiments, we never asked participants to try to empathize, but simply to look at these movies of other individuals.

Over past years, it has become increasingly evident, however, that we do not always empathize equally strongly. In an elegant study by Tania Singer, participants first played the prisoner's dilemma game with two other individuals. One of them, the good one, played fairly, and always reciprocated trust. The other, the bad one, systematically defaulted (Singer et al. 2006). Thereafter, the brain activity of the participant was measured while knowing that the good or bad guy experienced a painful electroshock. She found that the pain regions of the participant were activated when female participants witnessed the good or bad person receive an electroshock. She also found similarly strong activations when male participants witnessed the good person receive a shock. Witnessing the bad person receive a shock, however, failed to activate pain representation in the male participants. This finding illustrates how perceived fairness can influence vicarious pain activations. They also show how gender differences might be more complex than a simple difference in empathy. Indeed, towards the good person, the genders showed similar magnitudes of vicarious activations. However, the way that fairness influenced vicarious activation differed, with males showing more suppression than females. Such nuanced gender differences should be carefully considered in the way we train certain professions. If female soldiers, for instance, experience more empathy for the enemy than male soldiers, it can be essential to prepare both the soldiers and the psychological support staff for that difference.

Modulations of empathy have also been observed based on ingroup/outgroup difference. For instance, white participants show more pain empathy towards white victims, and black participants towards black victims (Avenanti et al. 2010; Azevedo et al. 2013). Also, in Zurich there are two rival football teams. Supporters of one of the teams were found to experience more empathy towards the pain of victims (randomly) described as supporting the same team than towards those supporting the opposing team. Hence, simple relabeling as in- or out-group, using what is sometimes called minimal groups, can suffice to modulate our empathy. The way politicians play around with notions of us *vs*, them can be considered an astute exploitation of this modulation of empathy.

Psychopathy and the Difference Between Ability and Propensity for Vicarious Activations

Psychopathic criminals represent a fascinating deficit model for empathy and morality. Unlike most of us, people with psychopathy seem to experience no empathy for their victims or guilt for their crime. Recently, we explored if this lack of empathy and guilt could be attributed to a lack of vicarious activations. We had incarcerated criminals diagnosed with psychopathy (according to the PCL-R) watch movies of other individuals experiencing a range of emotions, from pain to tender caresses. We also had the participants experience similar emotions, while measuring their brain activity using fMRI. Finally, we compared their brain activity during observation and experience with that of age- and IQ-matched control individuals from the general population. What we found was that brain activity while experiencing emotions of pain, exclusion and tenderness, did not differ significantly from that of controls. In contrast, the brain activity of the psychopathic criminals was reduced while witnessing the emotions of others (Meffert et al. 2013). We then asked the participants to watch the movies again, but this time instructing them to try to feel what the actors in the short movie clips felt. This led to a normalization of brain activity in the psychopathic individuals. This suggests a nuanced vision of psychopathy. Rather than lacking empathy in general, the pattern of brain activation suggests that they have reduced vicarious activations by default, but that they are able to show normal levels of vicarious activations when they want to (Meffert et al. 2013). This finding matches clinicians' impression that these individuals can be socially cunning when they want to, but can then switch to be callous when their goals involve hurting others. In that way, psychopathy might be conceived as an adaptation to a particular social niche, in which one uses empathy to exploit others, and then switches it off not to suffer vicariously with the sufferance one causes in victims. Some have indeed argued that psychopathic traits are helpful in certain professions requiring individuals to take financially optimal decisions even if they cause significant human suffering (e.g. firing the workforce of a company to return it to profit).

More generally, this alerts us to the fact that people may differ in empathy in multiple ways. If one takes a particular aspect of empathy, say vicariously feeling the pain of another, people may then differ along two dimensions. One dimension of individual difference is expressed when people want to empathize with that victim, for instance to understand what the other is feeling. In such a situation, some may have a higher *ability* to share the pain than others. The other dimension is best captured in contrast to the first, in situations in which the witness is motivated not to feel empathy. For instance, if we know that we could help someone by making significant personal sacrifice (e.g. by investing hours of one's time to help them get out of the psychological sufferance of having split up with their girlfriend), the cost of helping builds up a motivation to not empathize (and hence preserve one's time) (Zaki 2014). In such conditions, some of us still feel compelled to empathize, and ultimately to help. These individuals have a high propensity to empathize whatever the cost. In contrast, others, despite a similar ability to empathize, may more or less voluntarily down-regulate their empathy to prevent the cost of helping, and thus show a lower propensity for empathy (Keysers and Gazzola 2014; Keysers et al. 2014). Because different aspects of empathy depend on different brain regions motor empathy on motor brain regions, somatosensory empathy on somatosensory brain regions etc. - people's ability and propensity may differ across these different systems. Psychopathic individuals are then an extreme on the distribution of propensity.

The ability and propensity for empathy may dissociate in part, because they have very different potential behavioral consequences and hence adaptive values. The ability to empathize when one wants to is a 'neutral' capacity, in that it can be used for or against others. The ability can be used to help others, by being attuned to their needs. This is of particular importance for mammals: mammals need to be very sensitive to the needs of their babies, who depend entirely on parental care (including lactation) to survive, and being able to feel the distress of a crying baby is a powerful and intuitive motivation to help. The ability to empathize however can also be used against other people: we can attune to a person to feel how to manipulate that person, or to sense when a person is trying to hide something from us. This ability thus generally should provide its master with an advantage, in that it allows one to better understand and predict the behavior of others, giving us an opportunity to plan our actions more effectively to achieve our goals – be they pro- or antisocial.

The propensity to empathize always, i.e. to always feel the pain of others, is a less neutral capacity. If we always feel the pain of those that our actions harm, we are compelled to feel bad about these actions by virtue of the negative affect they generate in us. This would form an intuitive basis for a care-based morality. In contrast, a person able to turn their ability on and off at will would learn, based on simple operant conditioning, to down-regulate empathy when the result of empathy would be a negative affect, and to up-regulate empathy when it serves a purpose or procures joy. Hurting others would then no longer feel bad, and an intuitive carebased morality might not develop. In particular, vicarious pain would no longer get in the way of pursuing certain goal-directed actions. The businessman, facing the opportunity to maximize profit by laying off a good part of his work-force, would experience a very different decision-making process based on his propensity for empathy.

Of course, as human beings, our actions will not be driven by empathic emotions alone. A strong socialization may convince a businessman with low propensity for empathy to refrain from excessive firing. Conversely, a man with a strong propensity might still lay off his workforce because of the rational decision that he may jeopardize his capacity to employ people at all, if he does not ensure the competitiveness of his company. Moral decisions are obviously multifactorial, and empathy is just one component in the process (Eisenberg 2000; Prinz 2011).

From Empathy to Moral Actions

To conclude this analysis, we would like to offer some speculations on the relationship between vicarious activations and moral actions, and the role that culture can play in this relationship.

We consider the ability to vicariously activate motor, somatosensory and emotional states as a morally neutral building stone of moral decision-making. The sheer ability to feel what goes on in others can be used for good and bad deeds. A key factor for the moral consequences of this ability is the propensity with which the capacity is engaged in conditions in which we have no direct motivation to exercise empathy. The prototypical case is witnessing the suffering of a person who is not our kin or friend. In these situations, we can often help the person, but that will cost us money, time, effort or other valuable resources. Two bifurcations are then likely to determine how much help a given person might offer. First, the stronger our sharing of the pain, the stronger our motivation for helping will be, and the stronger our propensity to empathize, the more likely we should thus be to perform a moral action of costly helping. Second, given a certain propensity to empathize, people will still need to weigh the empathy they feel against their valuation of the cost that helping would incur.

Culture and our social environment can influence both of these bifurcations. With a given ability, a person with low propensity to empathize spontaneously can empathize more strongly if willing to do so. As our experiment with psychopathic criminals has shown, a simple request to empathize was enough to normalize vicarious activations. If our social surroundings were to encourage empathy, a person with lower propensity would then be more likely to empathize. In this context, it is fascinating to observe how present empathy encouragements are in the main religions. Matthew 7: 12: 'Do to others what you want them to do to you', for instance, is an invitation to empathize, to feel what you would like someone else to do if you were in the stead of the person in need. This would push a person with reduced propensity up, to experience more empathy, and hence give them motivation to help. Leviticus 19: 34: 'Love foreigners as you love yourselves' is an invitation to expand your propensity for empathy to those whose out-group status would otherwise downregulate empathy. Just as a simple label switch in Tania Singer's experiment (Hein et al. 2010) from football team A vs. B sufficed to up-regulate empathy, considering foreigners to be like yourself would boost empathy. Further, by putting the accent on good deeds rather than mere compassion, the teaching of Thomas Aquinas encourages people to change the balance between an empathy-driven motivation to help and an economically-driven motivation not to help. Moral teachings like these seem to recognize the importance of empathy in our decision-making and the risk in our not acting, and steer our human decision-making to the point where it can be most effective.

From an evolutionary point of view, one could conceive that genetic and memetic evolution push in slightly different directions. Genetic, i.e. traditional biological, evolution is based on the reproduction of genes. People who grade their empathy carefully, with maximal empathy for kin, followed by intermediate empathy for our friends who are likely to reciprocate help, and reduced empathy for competitors, seem to have the optimal strategy for promoting genetic multiplication from a selfish-gene perspective. Memetic evolution (Dawkins 1976), the idea that ideas are selected in an analogous way, by how effectively they are adopted by others, faces a slightly different pressure. If we empathize only with our kin and direct friends, large-scale cooperation within a nation or cultural group becomes very difficult. If we empathize more widely, we have a stronger base for cooperation. If two multiple groups exist, some with a culture of empathy driven by the golden rule, and some without, it is then likely that the group with stronger cooperation will prevail, and thereby multiply the notion of the golden rule. If one of this culture also readily accepts members of other cultures in its midst, the multiplication of the golden rule meme (where a meme is a functional unit of culture in analogy to the way in which the functional unit called a gene is for the genome) would be even more effective. That the most successful religions in the world all include the golden rule is compatible with the notion that by promoting empathy, these cultures have a competitive advantage mediated by increased cooperation and solidarity. In that context, people's actual moral decision-making may then reflect the interaction of a biological predisposition that is more nepotistic, and a cultural correction of this predisposition to a more widely empathic and thus collaborative socialized state.

Bibliography

Anisfeld, M. (1991). Neonatal imitation. Developmental Review, 11, 60-97.

- Avenanti, A., Sirigu, A., & Aglioti, S. M. (2010). Racial bias reduces empathic sensorimotor resonance with other-race pain. *Current Biology*, 20, 1018–1022.
- Azevedo, R. T., Macaluso, E., Avenanti, A., Santangelo, V., Cazzato, V., & Aglioti, S. M. (2013). Their pain is not our pain: Brain and autonomic correlates of empathic resonance with the pain of same and different race individuals'. *Human Brain Mapping*, 34, 3168–3181.
- Bastiaansen, J. A., Thioux, M., & Keysers, C. (2009). Evidence for mirror systems in emotions. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences, 364*, 2391–240.
- Bauer, E. P., LeDoux, J. E., & Nader, K. (2001). Fear conditioning and LTP in the lateral amygdala are sensitive to the same stimulus contingencies. *Nature Neuroscience*, 4, 687–688.
- Bi, G., & Poo, M. (2001). Synaptic modification by correlated activity: Hebb's postulate revisited. Annual Review of Neuroscience, 24, 139–166.
- Calder, A. J., Keane, J., Manes, F., Antoun, N., & Young, A. W. (2000). Impaired recognition and experience of disgust following brain injury. *Nature Neuroscience*, 3, 1077–1078.
- Caporale, N., & Dan, Y. (2008). Spike timing-dependent plasticity: A Hebbian learning rule. Annual Review of Neuroscience, 31, 25–46.
- Caspers, S., Zilles, K., Laird, A. R., & Eickhoff, S. B. (2010). ALE meta-analysis of action observation and imitation in the human brain. *NeuroImage*, 50, 1148–1167.
- Cook, R., Bird, G., Catmur, C., Press, C., & Heyes, C. (2014). Mirror neurons: From origin to function. *Behavioral and Brain Sciences*, 37, 177–192.
- Costantini, M., Galati, G., Romani, G. L., & Aglioti, S. M. (2008). Empathic neural reactivity to noxious stimuli delivered to body parts and non-corporeal objects. *European Journal of Neuroscience*, 28, 1222–1230.
- Dawkins, R. (1976). The selfish gene. Oxford: Oxford University Press.
- Del Giudice, M., Manera, V., & Keysers, C. (2009). Programmed to learn? The ontogeny of mirror neurons. *Developmental Science*, 12, 350–363.
- Desmurget, M., Reilly, K. T., Richard, N., Szathmari, A., Mottolese, C., & Sirigu, A. (2009). Movement intention after parietal cortex stimulation in humans. *Science*, 324, 811–813.
- Ebisch, S. J., Perrucci, M. G., Ferretti, A., Del Gratta, C., Romani, G. L., & Gallese, V. (2008). The sense of touch: Embodied simulation in a visuotactile mirroring mechanism for observed animate or inanimate touch. *Journal Cognitive Neuroscience*, 20, 1611–1623.
- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology*, 51, 665–697.
- Engel, A., Bangert, M., Horbank, D., Hijmans, B. S., Wilkens, K., Keller, P. E., & Keysers, C. (2012). Learning piano melodies in visuo-motor or audio-motor training conditions and the neural correlates of their cross-modal transfer. *NeuroImage*, 63, 966–978.
- Etzel, J. A., Gazzola, V., & Keysers, C. (2008). Testing simulation theory with cross-modal multivariate classification of fMRI data. *PLoS ONE*, *3*, e3690.
- Evangeliou, M. N., Raos, V., Galletti, C., & Savaki, H. E. (2009). Functional imaging of the parietal cortex during action execution and observation. *Cerebral Cortex*, 19, 624–639.
- Falk, D. (2004). Prelinguistic evolution in early hominins: Whence motherese? *Behavioral and Brain Sciences*, 27, 491–503; discussion 503–483.
- Friston, K., Mattout, J., & Kilner, J. (2011). Action understanding and active inference. *Biological Cybernetics*, 104, 137–160.
- Gallese, V., Fadiga, L., Fogassi, L., & Rizzolatti, G. (1996). Action recognition in the premotor cortex. *Brain*, 119(Pt 2), 593–609.
- Gazzola, V., & Keysers, C. (2009). The observation and execution of actions share motor and somatosensory voxels in all tested subjects: Single-subject analyses of unsmoothed fMRI data. *Cerebral Cortex*, 19, 1239–1255.

- Gazzola, V., Aziz-Zadeh, L., & Keysers, C. (2006). Empathy and the somatotopic auditory mirror system in human. *Current Biology*, 16, 1824–1829.
- Gazzola, V., Rizzolatti, G., Wicker, B., & Keysers, C. (2007). The anthropomorphic brain: The mirror neuron system responds to human and robotic actions. *NeuroImage*, 35, 1674–1684.
- Granger, C. W. J. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica*, 37, 414–438.
- Graziano, M. S., Aflalo, T. N., & Cooke, D. F. (2005). Arm movements evoked by electrical stimulation in the motor cortex of monkeys. *Journal of Neurophysiology*, 94, 4209–4223.
- Hebb, D. (1949). The organisation of behaviour. New York: Wiley.
- Hein, G., Silani, G., Preuschoff, K., Batson, C. D., & Singer, T. (2010). Neural responses to ingroup and outgroup members' suffering predict individual differences in costly helping. *Neuron*, 68, 149–160.
- Hietanen, J. K., & Perrett, D. I. (1993). Motion sensitive cells in the macaque superior temporal polysensory area. I. Lack of response to the sight of the animal's own limb movement. *Experimental Brain Research*, 93, 117–128.
- Hietanen, J. K., & Perrett, D. I. (1996). Motion sensitive cells in the macaque superior temporal polysensory area: Response discrimination between self-generated and externally generated pattern motion. *Behavioural Brain Research*, 76, 155–167.
- Jabbi, M., Swart, M., & Keysers, C. (2007). Empathy for positive and negative emotions in the gustatory cortex. *NeuroImage*, 34, 1744–1753.
- Jackson, P. L., Meltzoff, A. N., & Decety, J. (2005). How do we perceive the pain of others? A window into the neural processes involved in empathy. *NeuroImage*, 24, 771–779.
- Jackson, P. L., Brunet, E., Meltzoff, A. N., & Decety, J. (2006). Empathy examined through the neural mechanisms involved in imagining how I feel versus how you feel pain. *Neuropsychologia*, 44, 752–761.
- Jones, S. S. (2009). The development of imitation in infancy. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences, 364,* 2325–2335.
- Keysers, C. (2011). The empathic brain. Amsterdam: Social Brain Press.
- Keysers, C., & Gazzola, V. (2009). Expanding the mirror: Vicarious activity for actions, emotions, and sensations. *Current Opinion in Neurobiology*, 19, 666–671.
- Keysers, C., & Gazzola, V. (2014). Dissociating the ability and propensity for empathy. *Trends in Cognitive Sciences*, 18, 163–166.
- Keysers, C., & Perrett, D. I. (2004). Demystifying social cognition: A Hebbian perspective. Trends in Cognitive Sciences, 8, 501–507.
- Keysers, C., Xiao, D. K., Foldiak, P., & Perrett, D. I. (2001). The speed of sight. *Journal Cognitive Neuroscience*, 13, 90–101.
- Keysers, C., Kohler, E., Umilta, M. A., Nanetti, L., Fogassi, L., & Gallese, V. (2003). Audiovisual mirror neurons and action recognition. *Experimental Brain Research*, 153, 628–636.
- Keysers, C., Wicker, B., Gazzola, V., Anton, J. L., Fogassi, L., & Gallese, V. (2004). A touching sight: SII/PV activation during the observation and experience of touch. *Neuron*, 42, 335–346.
- Keysers, C., Kaas, J. H., & Gazzola, V. (2010). Somatosensation in social perception. Nature Review Neuroscience, 11, 417–428.
- Keysers, C., Meffert, H., & Gazzola, V. (2014). Reply: Spontaneous versus deliberate vicarious representations: Different routes to empathy in psychopathy and autism. *Brain*, *137*, 4.
- Kohler, E., Keysers, C., Umilta, M. A., Fogassi, L., Gallese, V., & Rizzolatti, G. (2002). Hearing sounds, understanding actions: Action representation in mirror neurons. *Science*, 297, 846–848.
- Lahav, A., Saltzman, E., & Schlaug, G. (2007). Action representation of sound: Audiomotor recognition network while listening to newly acquired actions. *Journal of Neuroscience*, 27, 308–314.
- Lamm, C., & Decety, J. (2008). Is the extrastriate body area (EBA) sensitive to the perception of pain in others? *Cerebral Cortex*, 18, 2369–2373.

- Lamm, C., Nusbaum, H. C., Meltzoff, A. N., & Decety, J. (2007). What are you feeling? Using functional magnetic resonance imaging to assess the modulation of sensory and affective responses during empathy for pain. *PLoS ONE*, 2, e1292.
- Lamm, C., Meltzoff, A. N., & Decety, J. (2010). How do we empathize with someone who is not like us? A functional magnetic resonance imaging study. *Journal Cognitive Neuroscience*, 21, 362–376.
- Lamm, C., Decety, J., & Singer, T. (2011). Meta-analytic evidence for common and distinct neural networks associated with directly experienced pain and empathy for pain. *NeuroImage*, 54, 2492–2502.
- Markram, H., Lubke, J., Frotscher, M., & Sakmann, B. (1997). Regulation of synaptic efficacy by coincidence of postsynaptic APs and EPSPs. *Science*, 275, 213–215.
- Marshall-Pescini, S., & Whiten, A. (2008). Social learning of nut-cracking behavior in East African sanctuary-living chimpanzees (Pan troglodytes schweinfurthii). *Journal of Comparative Psychology*, 122, 186–194.
- Meffert, H., Gazzola, V., den Boer, J. A., Bartels, A. A., & Keysers, C. (2013). Reduced spontaneous but relatively normal deliberate vicarious representations in psychopathy. *Brain*, 136, 2550–2562.
- Mobbs, D., Yu, R., Meyer, M., Passamonti, L., Seymour, B., Calder, A. J., Schweizer, S., Frith, C. D., & Dalgleish, T. (2009). A key role for similarity in vicarious reward. *Science*, 324, 900.
- Monfardini, E., Gazzola, V., Boussaoud, D., Brovelli, A., Keysers, C., & Wicker, B. (2013). Vicarious neural processing of outcomes during observational learning. *PLoS ONE 8*, e73879.
- Morrison, I., & Downing, P. E. (2007). Organization of felt and seen pain responses in anterior cingulate cortex. *NeuroImage*, 37, 642–651.
- Morrison, I., Lloyd, D., di Pellegrino, G., & Roberts, N. (2004). Vicarious responses to pain in anterior cingulate cortex: Is empathy a multisensory issue? *Cognitive, Affective, & Behavioral Neuroscience, 4*, 270–278.
- Morrison, I., Bjornsdotter, M., & Olausson, H. (2011). Vicarious responses to social touch in posterior insular cortex are tuned to pleasant caressing speeds. *Journal of Neuroscience*, 31, 9554–9562.
- Mukamel, R., Ekstrom, A. D., Kaplan, J., Iacoboni, M., & Fried, I. (2010). Single-neuron responses in humans during execution and observation of actions. *Current Biology*, 20, 750–756.
- Nelissen, K., Borra, E., Gerbella, M., Rozzi, S., Luppino, G., Vanduffel, W., Rizzolatti, G., & Orban, G. A. (2011). Action observation circuits in the macaque monkey cortex. *Journal of Neuroscience*, 31, 3743–3756.
- Penfield, W., & Faulk, M. E. Jr. (1955). The insula; further observations on its function. *Brain*, 78, 445–470.
- Prinz, J. J. (2011). Is empathy necessary for morality? In A. Coplan & P. Goldie (Eds.), *Empathy: Philosophical and psychological perspectives*. New York: Oxford University Press.
- Raos, V., Evangeliou, M. N., & Savaki, H. E. (2004). Observation of action: Grasping with the mind's hand. *NeuroImage*, 23, 193–201.
- Raos, V., Evangeliou, M. N., & Savaki, H. E. (2007). Mental simulation of action in the service of action perception. *Journal of Neuroscience*, 27, 12675–12683.
- Rescorla, R. A. (1967). Pavlovian conditioning and its proper control procedures. *Psychology Review*, 74, 71–80.
- Ricciardi, E., Bonino, D., Sani, L., Vecchi, T., Guazzelli, M., Haxby, J. V., Fadiga, L., & Pietrini, P. (2009). Do we really need vision? How blind people "See" the actions of others. *Journal of Neuroscience*, 29, 9719–9724.
- Rozzi, S., Calzavara, R., Belmalih, A., Borra, E., Gregoriou, G. G., Matelli, M., & Luppino, G. (2006). Cortical connections of the inferior parietal cortical convexity of the macaque monkey. *Cerebral Cortex*, 16, 1389–1417.
- Rozzi, S., Ferrari, P. F., Bonini, L., Rizzolatti, G., & Fogassi, L. (2008). Functional organization of inferior parietal lobule convexity in the macaque monkey: Electrophysiological characteriza-

tion of motor, sensory and mirror responses and their correlation with cytoarchitectonic areas. *European Journal of Neuroscience*, 28, 1569–1588.

- Schaefer, M., Xu, B., Flor, H., & Cohen, L. G. (2009). Effects of different viewing perspectives on somatosensory activations during observation of touch. *Human Brain Mapping*, 30, 2722–2730.
- Schippers, M. B., & Keysers, C. (2011). Mapping the flow of information within the putative mirror neuron system during gesture observation. *NeuroImage*, 57, 37–44.
- Singer, T., Seymour, B., O'Doherty, J., Kaube, H., Dolan, R. J., & Frith, C. D. (2004). Empathy for pain involves the affective but not sensory components of pain. *Science*, 303, 1157–1162.
- Singer, T., Seymour, B., O'Doherty, J. P., Stephan, K. E., Dolan, R. J., & Frith, C. D. (2006). Empathic neural responses are modulated by the perceived fairness of others. *Nature*, *439*, 466–469.
- Umilta, M. A., Kohler, E., Gallese, V., Fogassi, L., Fadiga, L., Keysers, C., & Rizzolatti, G. (2001). I know what you are doing. A neurophysiological study. *Neuron*, *31*, 155–165.
- Urgesi, C., Maieron, M., Avenanti, A., Tidoni, E., Fabbro, F., & Aglioti, S. M. (2010). Simulating the future of actions in the human corticospinal system. *Cerebral Cortex*, 20, 2511–2521.
- van der Gaag, C., Minderaa, R., & Keysers, C. (2007). Facial expressions: What the mirror neuron system can and cannot tell us. *Social Neuroscience*, *2*, 179–222.
- Wicker, B., Keysers, C., Plailly, J., Royet, J. P., Gallese, V., & Rizzolatti, G. (2003). Both of us disgusted in My insula: The common neural basis of seeing and feeling disgust. *Neuron*, 40, 655–664.
- Zaki, J. (2014). Empathy: A motivated account. Psychological Bulletin, 140, 1608–1647.

Christian Keysers is French and German and was born in Belgium. He took his PhD in St Andrews with David Perrett on the neural basis of face perception before moving to Parma (Italy) to work with Giacomo Rizzolatti on the Mirror Neuron System. He is best known for the discovery of auditory mirror neurons in primates and showing that the idea of mirror neurons also applies to our emotions and sensations using fMRI in humans. Since 2010 he has led, together with Valeria Gazzola, the Social Brain Lab at the Netherlands Institute for Neuroscience and is full professor for social neuroscience at the University of Amsterdam. His work has been cited over 7000 times (h=37). He is also a member of the Young Academy of Europe, the recipient of an ERC grant, and the author of the book *The Empathic Brain*.

Valeria Gazzola studied Biology in Parma, Italy, and started her scientific career in Rizzolatti's lab, where mirror neurons were first recorded. She then moved to the Netherlands where she investigates how our brains not only activate their motor system while viewing the actions of others but also their somatosensory and limbic brain while witnessing the somatosensory and emotional states of others. She is currently associate professor at the University of Amsterdam and a group leader at the Netherlands Institute for Neuroscience in Amsterdam, where she obtained a VIDI grant and a NARSAD young investigator award and supervises a group of two PhD students and a masters student investigating the causal relationship between vicarious activations and behavior by using a combination of fMRI, EEG, tDCS and TMS.

Chapter 9 The Trouble with Words: Concepts of Religion in the Cognitive Science of Religion and the Role of Emotions

Indrek Peedu

Abstract The following paper intends to point out how the concepts in use have significantly influenced and directed research in the cognitive science of religion – especially regarding the treatment and analysis of emotions and their relation to human religiosity. To exemplify this, the positions of the main cognitive researchers will be analysed and their concepts of religion highlighted. For contrast and comparison I will also highlight the way religiosity and emotionality are conceptualized and analysed in the costly signalling theory of religion, which can be considered an evolutionary alternative to cognitive approaches. In a more general discussion I will argue that the choosing of concepts and categories is a methodological act in the human sciences, comparable to the choice of experimental method in the natural sciences. However, as historical and anthropological comparative studies have well shown, it has become highly questionable whether the central concepts of the cognitive approach do signify something universally existent. Thus, because cognitive approaches have borrowed their conceptual tools from fields and conceptual systems which have fallen under severe criticism, they cannot afford to ignore the criticisms which have been raised concerning the usage of such concepts.

Keywords Cognitive science of religion • Definitions of religion • Emotions • Belief • Conceptual bias • Categorization • Rationalization • Theoretical explanations of religiosity

Introduction: The Trouble with Words

Reaching a satisfying definition of one's objects of study can often feel like the most tedious part of the research in the human sciences. It is hard or impossible to conclusively pinpoint and delineate the exact object. The situation in the study of

I. Peedu (🖂)

Faculty of Theology, University of Tartu, Tartu, Estonia e-mail: ipeedu@gmail.com

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_9

religion appears similar: defining religion seems like a never-ending quest with no clear solution to it. It can seem uninteresting, since so many have tried, so many definitions have been proposed and so little certainty has come out of it. But it can also appear misleading, as the studies of the past half a century have clearly shown how problematic it is to conceptually segregate a part of human life, call it 'religion', and declare it a separate, yet universal, aspect of human life. The argument is relatively straightforward: the schemes and models of categorisation which we take for granted today were historically conceived for reasons that are highly problematic in retrospect, and it is doubtful that we can overcome them, while continuing to use the same system of categorization (Smith 1991; Engler 2004; Schilbrack 2010, etc.). And in addition the matter of definitions can appear quite useless – in this day and age of increasing specialisation it is easy to envisage research goals so specific that the theoretical problems of grander scale can be ignored if one uses simple and straightforward definitions and limits oneself to strict and specific empirical research.

Yet, I would argue, the verbal systems of categorizations we use can be far more influential in the study of cultural phenomena than might at first sight appear. By deciding on which categories to use when specifying one's object of research, delineating its extent and distinguishing its parts, one determines what can be studied, what ought to be studied, and what differences or similarities one might find. In other words, I would argue that defining and categorising one's object of study is the primary methodological act in the human sciences. Simply put, we cannot place humans (let alone whole functioning societies) into a box in the lab and study them the way physicists or chemists study their objects. We cannot even get out of the 'box' that we are all living in – we are inevitably humans ourselves when doing our research. Thus studying humans is always a matter of participating in the very thing that we are studying. Due to this situation verbal categorisations are our primary tools of research; everything else (whether we pursue our topic through the means of philological study, anthropological observation, or psychological experiment) comes after that.

In the following discussion I am going to draw attention to the way in which highlighting one aspect of a wider phenomenon and declaring it the key aspect in explaining that phenomenon can conceptually pre-determine the role of other aspects and the ways in which they are empirically studied. Thus, in the following pages I will first give a short overview of the two most notable research programmes in the field: the cognitive science of religion and the costly signalling theory of religion,¹ concentrating on how they have conceptualised religion and how they interpret human emotionality through that concept. Next I plan to criticise the inherent problems of such conceptions and draw attention to alternatives which do not necessarily ascribe to emotions the role that has been ascribed to them so far. And lastly I plan to discuss why such approaches were preferred in modern cognitive and evolutionary approaches, and how or whether this could be different.

¹Although more recently the proponents of that theory have also preferred the more general term of 'the behavioral ecology of religion' (Sosis and Bulbulia 2011).

Definitions and Emotions in the Cognitive Science of Religion

Definitions are used as central tools of determination in cognitive science. And so far the cognitive science of religion has always been predominantly belief-centric. 'What is the origin of religious ideas?', Pascal Boyer (2001: 4) asks. Boyer then goes on to discuss various ideas, beliefs and concepts that he considers religious,² attempting to explain the development and function of religious ideas as such. The goal of Boyer's research, therefore, is to find out the reasons why people believe in religious ideas. Boyer appears to be convinced that by explaining belief in religious ideas it is possible to explain the phenomenon of religiosity in general. Right now it is not necessary to go into the specifics of his evolutionary explanation, but it is important to notice what takes place in such an explanation theoretically. The conceptual leap of such arguments is very noteworthy. Although at first the declared goal was explaining religious beliefs, the proposed explanation is then actually considered to be the explanation of religion overall. Thus, religion is interpreted as a kind of an inverted pyramid, where all other aspects of religiosity can be explained as secondary to the most fundamental aspect, which is presumed to be the centre of religiosity as such.

This kind of treatment of religion has remained prevalent in the cognitive science of religion. For example, in their influential article Bering and Johnson (2005) analyse how believing in supernatural agents affects the way people perceive and are cognitively affected by their belief. They argue: if people believe that supernatural agents have access to everything about them, then fear of supernatural punishment makes people more likely to behave morally. And because of that, religiosity became an inherent part of humanity in its evolutionary development. The conceptual exercise here is analogous to Boyer: by offering an evolutionary explanation of belief in supernatural all-access agents it is argued that they have explained religion overall. Bering takes the same path in his later book (Bering 2011), by arguing that although the psychological theory of mind is most useful in social interactions, it has also caused people to believe in the existence of supernatural agents: we ascribe agency and personified actions to things where nothing like that actually exists. All of it is simply caused by our eagerness to see agency everywhere. The influential article by Pyysiäinen et al. (2003) is another noteworthy example. There they present a study linking counterintuitiveness and the religiosity of ideas, thus arguing that counterintuitiveness is the essence of religion. It is taking the same conceptual path by studying explicit beliefs and deducing something about religion in general from it. Overall the conceptual exercise is yet again the same: by offering an explanation of belief in supernatural agents, one can explain religion overall and everything else is secondary to that belief.

²To be specific, he notes: 'Religious representations are particular combinations of mental representations that satisfy two conditions. First, the religious concepts violate certain expectations from ontological categories. Second, they preserve other expectations' (Boyer 2001: 62), and 'religious concepts invariably include information that is counterintuitive relative to the category activated' (Boyer 2001: 65).

One could continue this at some length.³ It is true that some other analyses (for example Atran 2004) have relied on more nuanced conceptualisations of their object of research, but overall there is a clear trend of studying cognitive, potentially conscious and verbally expressible beliefs and then making conclusions about religion in general based on such studies. It is worth noting here that in their more theoretical pronouncements the cognitive scientists of religion have at times explicitly argued against seeing religion as a universal and essentialised phenomenon (Vaas 2009; Barrett 2011), arguing that instead of studying religion as a whole, the cognitive approach has chosen to 'approach 'religion' in a piecemeal fashion' (Barrett 2011: 231). This would certainly be a welcome approach; however, in practice the cognitive study of religion has remained overwhelmingly belief-centric⁴ or, to be more precise, it has concentrated on anything that has been verbally expressed or that in principle can be expressed verbally (even if specific individuals do not regularly do that). Yet this has not stopped researchers from making general claims about religion based on studies which have concentrated on beliefs about supernatural agents. One can hope that in future the cognitive science of religion will follow more closely the dictum that Barrett has formulated. Unfortunately, right now it is more common to see studies which do indeed begin with a 'piecemeal fashion' approach and concentrate just on one part without making conclusions about the whole, but which then, in generalized statements, make claims about religion as a whole. As I noted earlier, this can be visualised as an approach which considers religion to be a kind of an inverted pyramid: there is a fundamental aspect in the middle or below everything else and thus everything else can be explained through that fundamental aspect. With such an approach it is not even inevitably necessary to think of that fundamental aspect (which in the case of the cognitive science is overwhelmingly 'belief') as the essence of it all, it is enough if one assumes it to be the key piece through which everything else can be understood and explained. Belief is presumed to be the stone that the rest of the pyramid stands on, so to speak.

Where does all this leave emotions? Are they discussed at all by the cognitivists? The answer to those questions is simple: the role of human emotionality is limited to a magnifying side-factor and in themselves they are not considered particularly noteworthy in human religiosity. Boyer (2001: 169–191) discusses the role of emotions only as part of his wider discussion concerning the relationship between religion and ethics. He sees emotions as amplifiers of moral positions – moral preferences are often thus expressed through emotional reactions. He does briefly (2001: 186) consider the possibility that emotions could be considered signals in a social environment, but overall emotions for him are not part of religiosity as such: emotions are attached to religious concepts and norms, to 'excite the human mind, linger in memory, trigger multiple inferences in the precise way that will get people

³Similar theoretical arguments are also present in Bering (2002), Tremlin (2006), Barrett and Lanman (2008), Pennycook et al. (2012), etc.

⁴This belief-centric approach extends even into the study of ritual, as Lawson and McCauley (1990, 2002) consider belief in culturally postulated supernatural agents a human universal, and this is the unifying aspect of their theory of religious ritual.

to hold them true and communicate them' (Boyer 2001: 329). Tremlin (2006: 121– 127), citing Pyysiäinen, also discusses emotions, but overall his discussion is similarly about the ways in which religious (counterintuitive) beliefs can evoke strong emotions. Lastly, Atran (2004: 136–137) does briefly consider the possibility that emotions can be seen as social signalling, but he does not pursue this idea at any length. Elsewhere in the cognitive science of religion emotions have not received even that much attention. Emotionality is therefore considered extraneous to human religiosity. What becomes apparent here is this: if religion is studied as a system of verbally expressible beliefs in supernatural agents (or in counterintuitive phenomena in general), then that belief-based conceptualisation of religion in itself already dictates that there cannot be aspects of emotionality which should be considered inherent to human religiosity. Emotions cannot be translated into the language of verbalised belief-statements, yet types of belief-statements and their spread is what the cognitive science of religion has concentrated on so far.

Definitions and Emotions in the Costly Signalling Theory

Before pursuing these matters further, another evolutionary approach – the costly signalling theory of religion – deserves a brief glance. Mainly this is necessary in order to show how in a comparable, yet conceptually rather different, evolutionary approach emotions acquire a more integral role in the explanation of religiosity. The costly signalling theory of religion differs from the cognitive approach because it considers human behaviour – in this case, specifically religious behaviour – to be the central aspect that needs to be explained evolutionarily. In the costly signalling approach religious actions (rituals above all, but also private prayers, etc.) are considered costly behaviours. From the perspective of the individual the evolutionarily optimal behaviour would not include actions that waste time and resources while gaining nothing in any way in improving the position of the individual in terms of evolutionary selection. Resources could be used in a far more optimal way (Sosis 2004, 2006; Bulbulia 2004).

However, this is not an insurmountable problem. For Sosis the primary ecological problem was the challenge of collective action that our ancestors faced (Sosis 2006: 68). Religious behaviours, badges and bans are seen as reliable ways of solving that problem, and they make collective action possible and beneficial from the perspective of the individual. He differentiates between three types of costly human signals which are used to indicate trustworthiness and devotion to the group: behaviours, badges and bans. Simply saying that one promises to do something can be faked, and quite easily so, but if one participates in time-consuming public rituals that indicate commitment, then faking those signals becomes significantly more costly. Also, significantly more difficult, since faking sincerity in front of a large group of committed people can be a very hard thing to do. To conclude: for the costly signalling approach religion 'is a way of packaging information' (Finkel et al. 2010: 305). In this context emotions are considered as some of the most important and reliable signals available to humans (Alcorta and Sosis 2005). Bulbulia argues that 'emotions function as signalling devices by linking motivational states to physiological responses whose characteristic manifestation identifies the presence of these states' (2004: 27). Such signals are reliable and honest because they remain largely outside the conscious control of the individual, and because they provide information about the organism's motivational state. Expressing the correct emotions can therefore indicate the sincerity and continuing social commitment of the individual, and thereby strengthen the group overall.

As one will have noticed by now, here emotions play a far more important role than they do in the cognitive approach. But, as I have noted, in this case the central aspect which the researchers wish to study and explain is behaviour. Therefore, instead of postulating 'belief in supernatural agents' as a human universal, ritual(ized behaviour) is considered central to religiosity. Without ritual indoctrination religious beliefs would lack emotional salience and motivational force (Alcorta and Sosis 2005: 344–345). This difference in the treatment of emotions is in a significant manner linked to the ways in which these two approaches also differ in their conceptualisation of religiosity. Depending on whether one conceptualises religion as a ritualised behaviour or as a mental act of belief-possession strongly affects the assessment of emotions. If religion is a matter of believing in supernatural agents, then emotions cannot be directly or primarily religious. Emotions, after all, cannot be properly expressed as verbalised statements.⁵ However, behaviours can be very emotional; behaviours can be directly motivated and effectuated by emotions and thus one can see them as an important part of religiosity.

Religion and Emotion – Looking for Alternatives

But is this then merely a matter of what one intends to study – how one chooses to conceptualize one's object of study? Should this mean that in the study of religious beliefs emotions would not be particularly important, but in the study of religious behaviours emotions can have a significant role to play? That would be a very troublesome conclusion indeed, since it would imply that perhaps we are not even studying the same object, even if both sides choose to call it 'religion'. Or it would imply that concepts always predetermine research with no way to overcome their limitations through empirical research. However, I do not wish to go quite that far in my argument. Rather, I wanted to point out how the choice of conceptual tools can play a significant role in the way in which something is included as part of the object of study or left out, and seen as merely a secondary add-on. This conceptual determination thus can take a strong form, in which it is indeed inevitable, but only if the usage of conceptual tools is not seriously thought out. By carefully

⁵For example, in human interactions a smiling face is always a far more meaningful expression of happiness than saying 'I am happy'. The same goes for anger and other emotions.

considering potential problems and limitations it is possible to overcome such predeterminations, at least to an extent.

To pursue this further I would like to draw attention to a few examples which point towards ways in which one does not inevitably have to ascribe a secondary role to religious emotions when one intends to concentrate on religious beliefs. Obviously there is much more to this whole topic of emotions and religion, thus the two examples I discuss should be seen as mere pointers – as ideas which perhaps could be studied further in the cognitive sciences as well. In the introductory chapter to a collection of articles dealing with conflicts of gods in various mythologies, Hans Kippenberg notes something rather significant: 'The images of conflict are elemental: two men fighting; the hero combatting the dragon; the rebellion of a woman against male predominance; a wicked tyrant attacking a holy man. Often several of these images are superimposed. Evidently they were intended to generate emotions not sober reasoning. Nevertheless most religions felt the need to elaborate these images systematically, placing the adverse principles in an apocalyptical or cosmological framework. [...] These images were used by believers as explanation of irrational events and represented these experiences. The content of these experiences differed basically in different religions' (Kippenberg 1984: 4–5). This discussion is significant because it points to a way in which one can concentrate on studying religious beliefs without presuming them to be the essential component to human religiosity, to which emotions at best are secondary. As implied by Kippenberg, our verbally expressible beliefs and stories could very well be secondary and superimposed to potentially elemental images of conflict. This is a very important point, and is something that deserves attention in the cognitive science of religion. So far the primacy of belief is overwhelmingly assumed. But that assumption might not be justifiable. After all, if Kippenberg's suggestions should turn out to be true and in many cases the systematic elaborations are only secondary to the effect of the images themselves, then studying the aftereffects – verbally expressed (systematic) beliefs - might not tell us much that is relevant about the situation in general, or about the beliefs themselves.

Another very intriguing line of thought can be found in an article by Luther H. Martin (2006). There Martin attempts to outline a cognitive perspective on the Roman cult of Mithras. As he points out, the major problem in the historical study of the cult is that no literary evidence for Mithraism has been discovered. This has led to attempts to reconstruct a presumed Mithraic myth in ways that would conform to the surviving material evidence. After reviewing such attempts to reconstruct the theology or mythology of Mithraism, Martin asks: 'what if Mithraism had no commonly held and transmitted creed, or even a narrative myth?' (Martin 2006: 132). He argues that quite probably this was the case. From there he goes on to argue⁶ that although scholars of religions have a tendency to understand mythological imagery primarily as allegorical guises for conceptual claims, then in ancient religion images were based on a quite different psychology and in all likelihood such images did not need to be explained conceptually (Martin 2006: 132–133).

⁶While referring to and citing Manfred Clauss as the originator of that idea.

Martin goes on to explain Mithraic practices based on the 'modes of religiosity' approach of Harvey Whitehouse (2004), but the important aspect here is the way in which Martin understands the relationship between verbally expressible beliefs and images. He considers it very likely that conceptualizable beliefs were secondary to images, or that images were 'hermeneutically telling' even without a conceptual explanation. Therefore Kippenberg and Martin in their independent discussions regarding the relationship between images and conceptualised beliefs point to historical and empirical materials, which give us reason to believe that one need not assume the primacy of verbally expressible beliefs in the cognitive study of religion. Of course this does not mean that one should give up the study of religion might not be necessary or justifiable.

Theoretical Discussion

Therefore, what I think the different evolutionary research programs of religion exemplify rather well is how strongly the categories we use and the questions we ask can and have guided our research so far. Concentrating on belief in supernatural beings as the central and universal phenomenon of religiosity has strongly affected the cognitive science of religion. Alternative evolutionary research programs have used different conceptual systems and have reached quite different conclusions. In the introduction I argued that the choice of our conceptual systems is the primary methodological act in the human sciences. Everything else comes after that. The sharp differences in the ways in which religion is conceptualized in the cognitive and in the costly signalling approaches should act as good examples of this.

Thus, at least methodologically they are certainly competing approaches, even if there have been attempts to turn them into complimentary approaches in more recent research (for example Purzycki and Sosis 2010). Therefore, the fact that the main researchers in the cognitive science of religion are studying religion as if verbally expressible and rationally analysable beliefs are the base or, so to say, the best access point (and – for some – the essence) of human religiosity,⁷ is theoretically most significant and does affect the way in which they are interpreting the empirical data, in relation to emotionality as well as to many other things.

However, in such a situation any fundamental criticism of belief as a centrally usable concept is also a direct methodological criticism of these cognitive

⁷For example Barrett and Lanman argue: 'we take belief to mean the state of a cognitive system holding information (not necessarily in propositional or explicit form) as true in the generation of further thought and behavior. Adopting a deflationary definition of beliefs as information that motivates actions (including speech acts) allows us to recognize that these sorts of beliefs underlie every religious action (including ritual, prayer, meditation, etc.) as well as the construction and proclamation of every religious doctrine. From this perspective, why people hold these sorts of religious beliefs (beliefs that motivate religious action), and why religious beliefs tend to take the forms that they do across time and place are central questions to the study of religion' (2008: 110).

approaches. Because of this it is unfortunate that cognitive approaches have chosen to ignore the amount of research that has gone into discussing whether words like 'religion' or 'belief' can be used as indicators of human universals or not. Of course, belief-centric study of religion has a long history in religious studies, going back to the Enlightenment era when people first began to understand religion as a system of empirically untestable beliefs. It was believed that the credibility and truth of those beliefs could be rationally evaluated. This belief-centric understanding of religiosity has crystallised in the now-famous minimal definition of religion, proposed by Edward Tylor: 'It seems best to fall back at once on this essential source, and simply to claim, as a minimum definition of Religion, the belief in Spiritual Beings' (Tylor 1871: 383). However, in the second half of the twentieth century such an approach to religion has been harshly criticised. The Eurocentric nature and cultural background of the concept of belief has been highlighted and its universal applicability has been questioned (Smith 1991; Saler 1977; Lopez 1998). Therefore, as summarized by Lopez, using 'belief' as an unproblematic central category is an assumption derived from the history of Christian theology; the universalist claims of Christianity have enabled belief to appear as a universal category central to all human religiosity (Lopez 1998).

Unfortunately in the cognitive science of religion these kinds of criticism have been completely ignored or brushed aside as insignificant, indicating that they are neither relevant nor scientifically interesting. For example, Barrett and Lanman (2008) and Lanman (2008) have simply redefined 'beliefs' in a slightly different and more generic manner, arguing that decades of work in the cognitive sciences and philosophy of mind justify the universalist use of the concept regardless of anthropological criticisms. It should be obvious, however, that simply referring to a long history of usage does not in itself prove the suitability of a concept.

Also, it is worth keeping in mind that in their larger comparative project cognitive science inevitably relies on the hermeneutical work of philologically and anthropologically oriented scholars.⁸ It is the result of this tradition of comparative religion and phenomenology which allows one to claim that people all around the world believe in supernatural beings. Most of the time this dependence on earlier/ classical scholarship is implicit, but sometimes the argument is explicitly stated.⁹ However, if one adopts the data of earlier research one also to some extent adopts the theoretical and methodological positions which enabled one to present such data. In such a situation one cannot just ignore criticisms of those theoretical and methodological positions. Earlier I argued that the choice of conceptual categories is the primary methodological decision to make in the human sciences. If one or

⁸This fact often goes unnoticed. But it is essential to keep in mind. Even though the modern evolutionary approaches like to present themselves as truly scientific and consider earlier approaches flawed, in reality they rely on such 'earlier' approaches when it comes to categories and data. Perhaps the best explanation and analysis of this argument can be found in Seiwert (2012).

⁹For example Bering and Johnson (2005: 121) cite Pettazzoni's work as proof that belief in supernatural agents is a human universal. But by doing this they also approve Pettazzoni's phenomenological methodology and his theoretical presumptions, because those enabled Pettazzoni to present his arguments and data in such a way.

another concept becomes problematic, it is comparable to a situation when one or another experimental method turns out to produce unreliable, biased or flawed data in the natural sciences. In such a case one cannot just adopt that experimental method for another field and ignore the criticisms which have arisen within that field itself. Unfortunately the cognitive science of religion largely has taken exactly this approach towards all the criticisms of the conceptual tools which have arisen in the past few decades.

Experimental methods as well as conceptual tools have always changed and developed in scientific research. For a while in the eighteenth and nineteenth century 'fetishism' was believed to be the central, universal category that one should use to describe human religiosity (Sharpe 1986: 18–19; Freeman 2014), until it fell out of use and was largely replaced by the 'animism' of Edward Tylor. Elsewhere, 'Lamaism' was another term which for a while was believed to be a good description of Tibetan Buddhism, until it was shown to be biased and ideologically problematic (Lopez 1996). The most significant recent development in religious studies is perhaps the growing criticism and abandonment of the concept of 'Hinduism'. For a variety of reasons it has turned out to be misleading and empirically inaccurate (for an excellent argument see King 1999). Overall I think it is justifiable to say that concepts and categories can be used in scientific research as far as they enable one to distinguish something from its surroundings (and thus make it independently researchable) or when they enable one to propose empirically testable hypotheses. Many concepts - such as fetishism, Lamaism and Hinduism among others - have been used in research, but have then fallen out of use. Reasons for this can be different, the concepts can end up being too vague, or ideologically too problematic, or occasionally it can even turn out that the presumed object does not even exist.

As many analyses have indicated, the concept of belief is far from being unproblematic and its applicability outside the Western context can be very problematic (Lopez 1998). Obviously this is part of the wider criticism and questioning of the universal usability of the concepts religious studies have taken for granted for over a century now (Engler 2004; Masuzawa 2005; Schilbrack 2010). Unfortunately the cognitive scientists right now seem to treat these criticisms as if they are a temporary 'postmodernist fad' which will just go away, if one ignores them long enough. However, these are discussions and criticisms that the cognitive science of religion cannot afford to ignore, as their own data and conceptual tools are derived from the same source.

The cognitive science of religion often views itself as an attempt to 'science up' religious studies and anthropology,¹⁰ but so far this attempt has come at the cost of conceptual credibility. To science up religion they have theoretically reduced their object of research to such a simplified level that there are good reasons for other scholars to be very critical of their research. This does not mean that religious studies should not be 'scienced up', but it does mean that if one intends to attempt that,

¹⁰For example Barrett argues that, 'the cognitive science of religion (CSR) arose out of attempts to 'science up' religious studies and the anthropology of religion without eliminating interpretive approaches' (2011: 229).

it cannot come at the cost of modelling its object of study in ways that ignore vital aspects of it and distort others. Concepts and categories, after all, are the most central tools available to us in the human sciences, and they need to be reliable for our research overall to be reliable. Of course experimental research requires one to at least somewhat simplify one's object to study, otherwise quantifiable research is just not possible. But perhaps in such a situation one should be more careful in assuming the universal applicability of one's conceptual tools (especially when thorough criticisms against such usage exist), and also one should not jump to ambitious generalizations about a complex phenomenon (religion) based on research concerning just one simplified phenomenon (belief in supernatural agents).

Conclusion

In conclusion, one can say that by conceptualizing religion as a belief-centric phenomenon the cognitive approach has in a way rationalized religion, portrayed it as a matter of linguistically specifiable statements, and has thereby theoretically presumed the primacy of one aspect of human religiosity above all others. This theoretical stance has caused the cognitive approach to see emotions as a secondary approach to religiosity, interpreting them as extraneous to the inherent core of religiosity and relevant only insofar as they help to magnify one or another aspect of religiosity. Such a result concerning emotions is not an empirically inevitable conclusion of their empirical studies, rather it has been predetermined by the theoretical assumptions their research relies on. As the existence of alternative, yet just as empirically focused, research programmes indicates, and as the comparative and historical studies of the supposed phenomena show, the centrality of beliefs is a theoretical presumption of the cognitive approach and not something that can be deduced directly from the worldwide religious diversity. It is part of the theoretical, not the empirical basis of their research.

In such a situation it is up to the proponent of the belief-category to show why the comparative and historical criticisms are not relevant or, in the case of existing evolutionary research programmes, to show why the alternative empirical approaches are inadequate. But as things stand right now, the belief-centric theories of the cognitive science of religion are but one possible approach among many. They show what can be done, when belief is adopted as the central or the key¹¹ element of religiosity, but so far they have not proven that this is the only valid approach. They have not disproven the alternatives (such as the costly signalling theory,

¹¹To elaborate in more detail: by 'central' I have in mind approaches which indeed to see 'belief in supernatural agents' as the fundamental or essential aspect of religiosity. These differ from approaches which merely see belief as the 'key' element. In such a case 'belief' might not be the essential or founding aspect of religiosity, but it is considered the best way how to unlock the complexity of the phenomenon itself. It is thus treated as the key element merely for practical research. (After all, in various sciences indirect methods are used to research something which for one reason or another cannot be researched directly.)

for example), they have merely presented themselves as one possible candidate for an overall theory, based on one specific combination of conceptual and empirical tools.

Bibliography

- Alcorta, C., & Sosis, R. (2005). Ritual, emotion, and sacred symbols: The evolution of religion as an adaptive complex. *Human Nature*, 16, 323–359.
- Atran, S. (2004). In gods we trust: The evolutionary landscape of religion. Oxford: Oxford University Press.
- Barrett, J. L. (2011). Cognitive science of religion: Looking back, looking forward. *Journal for the Scientific Study of Religion*, 5, 229–239.
- Barrett, J. L., & Lanman, J. A. (2008). The science of religious beliefs. Religion, 38, 109-124.
- Bering, J. (2002). The existential theory of mind. Review of General Psychology, 6, 3–24.
- Bering, J. (2011). *The belief instinct: The psychology of souls, destiny, and the meaning of life.* New York/London: W. W. Norton & Company.
- Bering, J. M., & Johnson, D. D. P. (2005). O Lord ... You Perceive my Thoughts from Afar": Recursiveness and the evolution of supernatural agency. *Journal of Cognition and Culture*, 5, 118–142.
- Boyer, P. (2001). *Religion explained: The human instincts that fashion gods, spirits and ancestors*. London: Vintage.
- Bulbulia, J. (2004). Religious costs as adaptations that signal altruistic intention. *Evolution and Cognition*, 10, 19–42.
- Engler, S. (2004). Constructionism versus what? Religion, 34, 291-313.
- Finkel, D. N., Swartwout, P., & Sosis, R. (2010). The socio-religious brain: A developmental model. In R. Dunbar, C. Gamble, & J. Gowlett (Eds.), *Social brain, distributed mind. Proceedings from the British Academy* (Vol. 158, pp. 287–312). Oxford: Oxford University Press.
- Freeman, A. (2014). Charles de Brosses and the French enlightenment origins of religious fetishism. *Intellectual History Review*, 24, 203–214.
- King, R. (1999). Orientalism and the modern myth of "Hinduism". Numen, 46, 146-185.
- Kippenberg, H. G. (1984). Introduction: Symbols of conflicts. In H. G. Kippenberg (Ed.), in association with H. J. W. Drijvers & Y. Kuiper, *Struggles of gods: Papers of the Groningen work* group for the study of the history of religions (pp. 1–6). New York/Amsterdam: Mouton Publishers.
- Lanman, J. A. (2008). In defense of "Belief": A cognitive response to behaviourism, eliminativism, and social constructivism. *Issues in Ethnology and Anthropology*, 3, 49–62.
- Lawson, T. E., & McCauley, R. N. (1990). *Rethinking religion: Connecting cognition and culture*. Cambridge: Cambridge University Press.
- Lawson, T. E., & McCauley, R. N. (2002). The cognitive representation of religious ritual form. In I. Pyysiäinen & V. Anttonen (Eds.), *Current approaches in the cognitive science of religion* (pp. 153–176). London/New York: Continuum.
- Lopez, D. S., Jr. (1996). "Lamaism" and the disappearance of Tibet. *Comparative Studies in Society and History*, 38, 3–25.
- Lopez, D. S., Jr. (1998). Belief. In M. C. Taylor (Ed.), Critical terms for religious studies (pp. 21–35). Chicago/London: The University of Chicago Press.
- Martin, L. H. (2006). The Roman cult of Mithras: A cognitive perspective. Religio, 14, 131-146.
- Masuzawa, T. (2005). *The invention of world religions, or how European universalism was preserved in the language of pluralism.* Chicago/London: The University of Chicago Press.
- Pennycook, G., Cheyne, J. A., Seli, P., Koehler, D. J., & Fugelsang, J. A. (2012). Analytic cognitive style predicts religious and paranormal belief. *Cognition*, 123, 335–346.

- Purzycki, B. G., & Sosis, R. (2010). Religious concepts as necessary components of the adaptive religious system. In U. Frey (Ed.), *The nature of god: Evolution and religion* (pp. 37–59). Marburg: Tectum Verlag.
- Pyysiäinen, I., Lindeman, M., & Honkela, T. (2003). Counterintuitiveness as the hallmark of religiosity. *Religion*, 33, 341–355.
- Saler, B. (1977). Supernatural as a Western category. Ethos, 5, 31-53.
- Schilbrack, K. (2010). Religions: Are there any?'. Journal of the American Academy of Religion, 78, 1112–1138.
- Seiwert, H. (2012). The study of religion as a scientific discipline: A comment on Luther Martin and Donald Wiebe's paper. *Religio*, 20, 27–38.
- Sharpe, E. J. (1986). Comparative religion: A history (2nd ed.). London: Duckworth.
- Smith, W. C. (1991 [1962]). The meaning and end of religion. Minneapolis: Fortress Press.
- Sosis, R. (2004). The adaptive value of religious ritual. American Scientist, 92, 166-172.
- Sosis, R. (2006). Religious behaviors, badges and bans: Signaling theory and the evolution of religion. In P. McNamara (Ed.), Where god and science meet: How brain and evolutionary studies alter our understanding of religion. Vol. 1: Evolution, genes, and the religious brain (pp. 61–86). Westport: Praeger Publishers.
- Sosis, R., & Bulbulia, J. (2011). The behavioral ecology of religion: The benefits and costs of one evolutionary approach. *Religion*, *31*, 341–362.
- Tremlin, T. (2006). *Minds and gods: The cognitive foundations of religion*. New York/Oxford: Oxford University Press.
- Tylor, E. (1871). Primitive culture: Researchers into the development of mythology, philosophy, religion, art and custom (Vol. I). London: John Murray.
- Vaas, R. (2009). Gods, gains and genes: On the natural origin of religiosity by means of biocultural selection. In E. Voland & W. Schiefenhövel (Eds.), *The biological evolution of religious mind and behavior* (pp. 25–49). Berlin/Heidelberg: Springer.
- Whitehouse, H. (2004). *Modes of religiosity: A cognitive theory of religious transmission*. Walnut Creek: AltaMira Press.

Indrek Peedu is a PhD Candidate at the Faculty of Theology of the University of Tartu. His current research concentrates on the methodological and epistemological questions of the study of religion and the cognitive science of religion more specifically.

Chapter 10 The Emotional Brain Hypothesis: Emotional, Social, and Religious Vetting in the Evolution of Rational Decision Making and Scientific Modeling

Margaret Boone Rappaport and Christopher Corbally

Abstract While sociability has been recognized as a foundation of human evolution and is now well integrated into models of human origins, emotionality has received less attention. It is proposed here, in this preliminary concept paper, that emotionally-informed decision-making developed to the benefit of members of the genus *Homo*, as an integral part of the evolution of sentience in the hominin line. Emotionality is especially important in the higher expressions of sentience – science, religion, and art – but also in vetting all rational and scientific thought. The authors propose that future researchers in the cognitive science of religion, archaeology, evolutionary psychology, and evolutionary biology incorporate analysis of both emotionality and sociability into their protocols. A brief scenario of early hominin interaction in the search for food is presented, along with a discussion of the emotions involved. In the future, rational decision-making that is vetted by both social and emotional intelligence, as well as religious and ethical precepts, will help to provide solutions to world problems. Emotionality remains critically important for members of the genus *Homo* as an aspect of their attainment of sentience.

Keywords Sentience • Hominin • Emotion • Sociability • Religion • Adaptation • Evolution • Archaeology • Matrix Thinking • Ethics • Global challenges

M.B. Rappaport (⊠) Georgetown University, Washington, DC, USA e-mail: msbrappaport@aol.com

C. Corbally Department of Astronomy, University of Arizona, Tucson, AZ, USA e-mail: corbally@as.arizona.edu

© Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_10

New Understanding of Emotionality in the Evolution of Sentient Hominins

In responding to ESSSAT's 2014 call for papers, 'Do Emotions Shape the World?', we took the opportunity to address a central theme in our work on human sentience on the hominin evolutionary line, and on the origins of scientific, religious, and artistic thought. We propose that human sentience, our awareness, and particularly our self-awareness, is far from a purely rational, cognitive, or intellectual capacity. Our list of the Components of Sentience¹ have cognitive, perceptual, and emotional features, and our Advanced Domains of Thought (science, religion, art, and perhaps sport and cuisine) have creative, cognitive, and emotional features that underpin all. We propose that the emotionality of sentience cannot be extricated from it, and therefore, emotional evaluation by members of the genus *Homo* (including *Homo sapiens*, his forebears, and near relatives) is an integral part of sentience. Only among members of the genus *Homo* do creatures routinely contemplate and analyze their own existence. We have called the attainment of sentience 'crossing the latest line,' because only with sentience does Big History become 'reflexive' and able to look back on itself (Rappaport and Corbally 2015; Corbally and Rappaport 2013).

Emotionality in the hominin line of evolution has been acted upon by natural selection. As mammals became more complex, they became more emotional, partly because of lengthening periods of intense child-rearing, especially among humans and anthropoid apes, but also, we propose, partly because emotions enabled humans to make better decisions for the social group.

We submitted science, religion, and art to 'tests' designed to confirm adaptations that arise in response to natural selection (Fiddick and Barrett 2001). After exploring interdisciplinary literatures from the cognitive science of religion to archaeology, and from evolutionary biology to genetics, we conclude that sentience and its highest capacities could be none other than *bona fide* biological adaptations because of their pervasiveness, tenacity, flexibility, internal complexity and coherence, ubiquity in all human cultures, and ancient origins in the deepening archaeological record that now goes back to the Middle Stone Age in Africa, perhaps 200,000 years ago.

Emotion is an integral topic of study in diverse fields of the sciences and humanities, including: stones-and-bones archaeology (Tarlow 2012) and cognitive archaeology (De Beaune et al. 2009); evolutionary psychology (Cosmides et al. 2010) and cognitive psychology (Platek et al. 2006); evolutionary biology (Wynn and Coolidge 2011 on 'working memory', and Fiddick and Barrett 2001 on the metamorphosis of

¹Our General Components of Sentience, from a review of scientific, artistic, religious, and literary sources are: Consciousness, Awareness, Self-awareness, Desire, Will, Personality, Prudence, Introspection, Concentration without easy distraction, Symbolic thinking, Intelligence (intellectual, social, emotional), Social sensitivity, Ability to anticipate intentions of others, Insight, Sympathy, Empathy, Social sensibility, Charity or values-based altruism, Capacity to fall in love, Ethics, Wisdom, and Matrix Thinking.

'proper [original] functions' to 'actual [today's] functions'); population genetics (Cochran and Harpending 2010; Pickrell et al. 2012) and the analysis of mitochondrial DNA from human ancestors and near relatives (Mayer et al. 2014); the ethnological study of present-day hunter-gatherers (Barnard 1992); the cognitive science of religion (Van Slyke 2011); and literature, where many concepts in the sciences are first imagined.

Archaeologists and evolutionary biologists peg what most call 'modern thinking' to the origins of the species *Homo sapiens*. Early humans who left behind complex tools, paint production, self-decoration (strings of beads), evidence of long distance trade, knowledge of a pharmacopeia, and external storage devices (purposefully incised red ochre) are often called 'behaviorally modern' (e.g. D'Errico 2003) or 'culturally modern' (Wadley 2001). We propose that the attainment of sentience is equivalent to behavioral modernity. Early humans were becoming increasingly complex emotionally and more pre-disposed to artistic, scientific, and religious thought, compared to those who came before them.

We suggest reclaiming the term 'sentience' for the hominin line. Many writers use 'sentient' as synonymous with 'rational' or 'intelligent.' This meaning has even wormed its way into modern advertising, in which 'Sentient Jet' service is said to be 'powered by rational thinking' (WSJ Magazine, Feb 2014, 46). Others see 'sentient' as synonymous with 'symbolic,' although the latest evolutionary psychologists and semioticians find human beings to be far more than symbolic thinkers – as do we, even while we have worked to develop the concept of 'Matrix Thinking,' which, we believe, is at the heart of creativity for scientific, religious, and artistic thought (Rappaport and Corbally 2015).

We propose that human sentience is an evolved, complex adaptive capacity that is cognitive, but - at least in the version of sentience that evolved on planet Earth based on specific perceptual and emotional features, too. Our evolutionary development makes it almost impossible for humans to make decisions that are strictly rational and scientific. The species has a biology with very specific abilities to perceive certain phenomena in the natural world, and very specific tendencies to make sense of information in certain ways (like the tendency for teleological thinking). Human decision-making always takes place within a social matrix, even when a person is alone. Emotional features underlie many of the components of sentience, making it virtually impossible for humans to engage in decisionmaking and scientific modeling without the use of emotional systems, which are embedded in our neural networks, hormonal systems, our skin and sweat glands, facial musculature, and other biological systems. Emotional and social vetting lie at the heart of human decision-making, and research to further test this hypothesis will continue to be helpful. Neuroscientist Damasio's Somatic Marker Hypothesis gives an early statement of these connections in Descartes' Error (1994: xii and 173ff). Damasio extends some of his discussion to evolutionary science in The Feeling of What Happens (1999). One of our goals is to develop similar models more fully for the fields of archaeology, human evolution, and the cognitive study of religion.

We propose that modern humans routinely vet so-called 'rational decisions' in a framework not only of social relationships and emotionality, but also in an ethical framework, often as embodied in religion. Humans are not simply symbolic thinkers, but rational thinkers with social, emotional, and ideological systems. We do not make decisions alone ... ever. We usually do not make even the most 'rational' decision without intuitively asking ourselves, 'Does it feel right?'

Emotionality is a basic building block in our understanding of sentience and it comes into play especially in religious experience and artistic expression, but also in planning and strategizing. From the perspective of natural selection, the decisions that humans make are – eventually and ultimately – for the benefit of the group. Hominins did not evolve as individuals, but as very smart, very emotional beings who were, and remain, utterly dependent on their social group. Evaluation of rational decision making took place constantly within a social and emotional context of individuals who encouraged, supported, challenged, and argued with each other in order to arrive at good decisions.

Sentience, including rational thought, is now conceived solidly within a social matrix for early humans, and a better understanding of emotionality is emerging because of new archaeological and genetic evidence of early humans. Recent interest in emotionality builds upon a solid foundation of work on sociability by evolutionary biologists and psychologists. Nowhere have humans evidenced sociability *without* emotion (however covertly expressed), unless pathological. Emotion is embedded in human social life. The Social Brain Hypothesis (Stringer 2012; Dunbar 1998); the concepts of 'deep social mind' and 'socio-cognitive niche' (Whiten and Erdal 2012); 'cultural ratcheting' as a source of learning and creativity in social groups (Dean et al. 2012) have all been widely reviewed and integrated into models of human origins.

We propose that the emotionality which is ubiquitous in all of modern man's activities was also an integral part of early humans' survival toolkit on the African savannah. Emotion was, and is, fundamental to the successful adaptations of the species in the genus *Homo*, just like sociability. One could call this proposition, 'The Emotional Brain Hypothesis,' analogous to Dunbar's 'Social Brain Hypothesis.'

However, when we examine Dean et al.'s 2012 report on a creative experiment comparing the efforts of human children with chimpanzees and capuchin monkeys (both recorded as having the rudiments of 'behavioral traditions') in solving the same puzzle box task, we see little discussion of emotion. There is much on social interaction, social skills, bargaining, mutual encouragement, but little on the emotion contained in all of these social maneuverings. The words 'emotion' and 'feeling' are found zero (0) times in the four-page article, while 'social' and its various forms (prosocial, prosociality, non-social) are found a total of 43 times. We wonder about emotion when we read the following results on cultural ratcheting in Dean et al., where social interaction paves the way for problem-solving (2012).

A total of 23 unambiguous instances of teaching by direct instruction ... were observed ... of which all involved task-relevant communication (e.g., 'push that button there') ... A strong positive relationship was observed between the amount of instruction received and the stage reached by a child ... the proportion of manipulations that children performed at

the same time that another individual was in proximity was significantly greater than in either chimpanzees or capuchins, indicating greater tolerance of others, cooperation, and shared motivation among children (Dean et al. 2012: 1115).

Anyone who has watched children play knows that this kind of group problemsolving is never emotionless.

Closer inspection of the children's behavior supports the conclusion that a package of social cognitive capabilities, encompassing teaching (largely through verbal instruction) as well as matching (e.g., imitation) and prosociality (altruism), was critical for performance at the highest level (Dean et al. 2012: 1117).

The authors rightly conclude that sociability provides a scaffold upon which to erect solutions to a puzzle box task, but they do not address the role of emotion in finding solutions with others. We know intuitively that emotion is there, because without it social problem-solving by human children would not seem normal. It would look and feel odd. Results from Dean et al. show clearly that problem-solving proceeds best for human children when they appear to interact on all levels: social, intellectual, and emotional. Social learning is the advantage that human children have over chimpanzees and monkeys in the experiment. Yet, we propose that it is not only social interaction that creates the effect of 'cultural ratcheting' as the common learning mode of *Homo sapiens* and his predecessors, but the attendant emotion, as well.

To date, emotionality has received less attention than sociability in archaeology and studies of human evolution. There have been some surveys of 'emotion and archaeology' (Panksepp and Biven 2012) and 'the history of emotions' (Rosenwein 2010), but emotion has not yet achieved the central importance of sociability in evolutionary science. The newly emerging literature on the 'archeology of emotion' (Tarlow 2012) is addressing methods for understanding emotion in the archaeological record. We propose that evolutionary psychologists and biologists incorporate analysis of emotion into their protocols, in addition to social interaction.

The Social, Emotional, and Ethical Context of Effective Decision Making

Let us take a look at a brief scenario of early hominin interaction in the search for food, and the emotions involved.

The Human Sentience Project is developing Astronomy Skits for secondary school science students, and the skits are based on the expertise of the two Co-Founders, an anthropologist and an astronomer. They are five-minute dramatic productions for two characters, and the goal is to interest young people in science careers. An example of decision-making that is emotionally, socially, and intellectually based, comes from a skit developed for our forthcoming book – *Space Science and Astronomy Skits*. A skit entitled, 'Early Humans at Blombos Cave: Middle Stone Age Constellations,' takes place on the southern coast of Africa,

approximately 75,000 years ago. A man and a woman sit warming themselves at a campfire in the evening. The man is Seer, the local medicine man. The woman is Em, the daughter of the aging head man. Seer comments on the cold of the evening, and Em agrees, reminding him that last evening was cold, too.

SEER: The air is cold tonight.

EM: Hm. And last night, too.

SEER: It is the wrong time of the year to have cold nights.

EM: Hm. The stars are very bright. They are bright when it's cold.

- SEER: The spirits are restless tonight, Em. Can you hear them calling in the wind? Can you see them speaking to us in the twinkling stars?
- EM: No, only you hear and see such things, Seer. I hear the wind. I see the stars. I wouldn't know they were spirits... without you.
- SEER: (*He looks at her and smiles fondly*.) You are a good woman, Em. Smarter than most! And braver than most! You have gone to meet the Others to the north of us...
- EM: Hm. I went with my father and the other men, to help them with the skins ... We were hungry, so we followed the animals. That's not brave. That's hungry.
- SEER: But they say that you went out first to meet the Others, that you walked with your hands open to the headman of their group, and that you signaled with your hands, and they understood ... You are brave, Em.
- EM: The herds are more plentiful to the north, Seer. Have your spirits told you that?
- SEER: Your father believes we should wait here, that we should be patient, Em. There has always been food here from the sea ... although it is harder to catch ... The weather will improve. We have had bad years before.
- EM: Hm. He is an old man, Seer. We must leave if we are to live. You must go. You must find us a better place and make friends with the Others. You can do this, Seer. I've seen you talk with people. Talking with the spirits is useful, but talking with people is more useful. You must go.
- SEER: (He hesitates, and stirs the campfire.) Not without you.
- EM: (*She shakes her head*.) I am too old for you, Seer. I was five winters and five summers when you were born.
- SEER: (*He laughs*.) You are not too old for me, Em. Remember, I have seen how you talk with people, too.
- EM: Why are you laughing?
- SEER: You might be as good as me!
- EM: Hm. Foolish man ... I will not go with you, but I will show where to go and how to get there. And ... if you're very lucky ... I will wait here for you and, hm, consider your ... offer.
- SEER: How can you show me where to go if you don't go with me? I don't understand, Em.
- EM: (*She draws an incised piece of red ochre from her cloak of skins*.) Take this, Seer, and use it to find the Others.
- SEER: (*He takes the piece and peers at it for some time.*) This is like the charts I made of the positions of the stars.

EM: This is not a picture of the positions of the stars. This is a picture of the signs you follow to find the Others.

SEER: Oh! It's a star chart of the land!

EM: Hm. Yes, in a way. It tells you which way to go when you reach each of the tall peaks. I remember them, and the direction we came back home.

SEER: (He shakes his head.) I cannot ...

- EM: You must. The nights are too cold here. Too many of our babies are dying, Seer. You must take this and find another place with people who will welcome us ... Talk with them.
- SEER: (*He stares at her for some moments.*) I will go ... but you must promise me that you will be here waiting.
- EM: I will wait for you. Just find us a way to survive! You can do it, Seer! Just follow the star chart of the land, and talk to the Others the way you do so well.

In this short drama, Em encourages Seer to leave the group and seek out 'the Others' (another band of early humans). The weather has become too cold, their food is in short supply, and too many babies are dying. He hesitates, reminding her that her father has known other cold spells. She again encourages him to leave and, handing him a piece of intricately incised red ochre, tells him it marks the way to the Others – a kind of map. She promises to wait for him, but insists that he must leave for the sake of them all. He must find them a warmer place to live.

This was the first *dramatic* skit written for the Astronomy Skits book. The others are rather humorous. This one is serious because it concerns changing climate, the search for food, and selection pressure on a human population. During the Late Pleistocene, Africa was subject to changing climate and sometimes early human populations had to move. The skit involves one such instance.

The emotion involved in the dramatization is important. There is fear, anxiety, hope, love, and understanding between the man and the woman. None of these emotions is found openly and clearly in archaeological finds, but we do have incised ochre pieces whose meaning we do not understand. What were they used for? What rituals and self-adornments were involved in their use? What emotions came into play? We can only imagine. However, humans are good at imagining, especially about beings that were so closely related to modern man.

What we know is this. Out of the extraordinary biological diversity found in the many sub-types of early humans, who faced the challenges of adversity in Africa and Eurasia, only our human species survived into the modern era (Stringer 2012). What role emotionality played in our survival, we are only now beginning to understand. Emotion is an important part of both religion and art, and both the anxiety and excitement that attend scientific discovery.

In the evolution of sentience in the genus Homo, we find adaptive excellence in both body and mind. Emotionality responded to natural selection and evolved as an integral part of that excellence. The lines of men and women who survived the African savannah and went on to conquer the remainder of Earth's land masses, skies, and Moon – those hominins who are our forebears and neighbors – must have found at least some succor in science and technology, surely, but also in religious
and artistic thought, and in the emotion they so often embody and symbolize. Emotion sustains us, propels us, stops us, and gives us hope for the future. Without it, we are perhaps sometimes more clear thinking, but we would be, at the same time, lost.

This is an important insight about humanity. We make decisions in a context of society and with a foundation of emotions about, and scientific knowledge of, our environment.

Effective Educational Formats for Coping with Global Challenges

In The Human Sentience Project, we teach about a capacity called Matrix Thinking, which involves the dynamic juxtaposition of different paradigms to create new cultural knowledge (Rappaport and Corbally 2015). Emotion will always play a role in that process because comparisons, contrasts, and analogies involve emotion, both in their evaluation and in their projection from one part of our thinking to another. The Human Sentience Project is preparing another book for young adults, 'A Dialogue between Priest and Anthropologist on Evolution,' where we include a discussion of the importance of emotion in vetting all types of cultural knowledge. Science, religion, and art, and the emotions interwoven in their full expression, help young adults control the uncontrollable, predict the unpredictable, and know the unknowable – as they did for ancient hominins. When young adults make decisions, they should know that emotionality is not necessarily a hindrance to clear thinking, but that it can be a special advantage. If a decision does not 'feel right,' then a different evaluation and decision may be necessary.

Humanity's future will depend on reason and science, but also on the innate, emotional good sense of members of human social groups, and a moral sense of right and wrong that is so often codified in theology and expressed in human spirituality. We propose that full use of rational decision making requires vetting by both social and emotional intelligence, as well as religious precepts. These will all help humans in the future to be better citizens; to gain control of a mushrooming quantity of data; and to make ethical decisions about advances in technical fields such as genetics, nanotechnology, and resources management.

Bibliography

Barnard, A. (1992). *Hunters and herders of southern Africa: A comparative ethnography of the Khoisan peoples.* Cambridge, MA: Cambridge University Press.

Cochran, G., & Harpending, H. (2010). The 10,000 year explosion: How civilization accelerated human evolution. New York: Basic Books.

- Corbally, C. J., & Rappaport, M. B. (2013). Crossing the latest line: The evolution of religious thought as a component of human sentience. In L. E. Grinin & A. V. Korotayev (Eds.), *Evolution: Development within big history, evolutionary and world-system paradigms, yearbook* (pp. 197–218). Volgograd: Uchitel Publishing.
- Cosmides, L., Barrett, H. C., & Tooby, J. (2010). Adaptive specializations, social exchange, and the evolution of human intelligence. *Proceedings of the National Academy of Sciences*, 107(Supplement 2), 9007–9014.
- D'Errico, F. (2003). The invisible frontier: A multiple species model for the origin of behavioral modernity. *Evolutionary Anthropology*, *12*(4), 188–202.
- Damasio, A. (1994). Descartes' error: Emotion, reason, and the human brain. New York: Penguin.
- Damasio, A. (1999). The feeling of what happens: Body and emotion in the making of consciousness. Orlando: Harcourt, Inc.
- De Beaune, S. A., Coolidge, F. L., & Wynn, T. (2009). Cognitive archaeology and human evolution. New York: Cambridge University Press.
- Dean, L. G., Kendal, R. L., et al. (2012). Identification of the social and cognitive processes underlying human cumulative culture. *Science*, 335, 1114–1118.
- Dunbar, R. (1998). The social brain hypothesis. Evolutionary Anthropology, 6(5), 178-190.
- Fiddick, L., & Barrett, H. C. (2001). Evolution of cognition: An adaptationist perspective. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social and behavioral sciences* (pp. 4996–5000). New York: Elsevier.
- Mayer, M., Fu, Q., Aximu-Petri, A., et al. (2014). A mitochondrial genome sequence of a hominin from Sima de los Huesos. *Nature*, 505, 403–406.
- Panksepp, J., & Biven, L. (2012). The archaeology of mind: Neuroevolutionary origins of human emotions. New York: W. W. Norton & Company.
- Pickrell, J. K., Patterson, N., Barbieri, C., et al. (2012). The genetic prehistory of southern Africa. *Nature Communications*, 3, Article No. 1143 online, Nature.com.
- Platek, S., Shackelford, T., & Keenan, J. (Eds.). (2006). *Evolutionary cognitive neuroscience*. Cambridge, MA: The MIT Press.
- Rappaport, M. B., & Corbally, C. (2015). Matrix Thinking: An adaptation at the foundation of human science, religion, and art. *Zygon; Journal of Religion and Science 50*(1), 84–112.
- Rosenwein, B. H. (2010). Problems and methods in the history of emotions. *Passions Context* Journal of History and Philosophy of Emotion, 1, 1–32.
- Stringer, C. (2012). *Lone survivors: How we came to be the only humans on earth.* New York: Times Books, Henry Holt and Company.
- Tarlow, S. (2012). The archaeology of emotion and affect. *Annual Review of Anthropology, 41*, 169–185.
- Van Slyke, J. A. (2011). The cognitive science of religion. Burlington: Ashgate Publishing.
- Wadley, L. (2001). What is cultural modernity? A general view and a South African perspective from rose cottage cave. *Cambridge Archaeological Journal*, *11*, 201–221.
- Wall Street Journal Magazine (2014, February). Sentient Jet [advertisement]. p. 46.
- Whiten, A., & Erdal, D. (2012). The human socio-cognitive niche and its evolutionary origins. *Philosophical Transactions of the Royal Society B*, 367, 2119–2129.
- Wynn, T., & Coolidge, F. L. (2011). The implications of the working memory model for the evolution of modern cognition. *International Journal of Evolutionary Biology*, 2011, 1–12.

Margaret Boone Rappaport is a cultural anthropologist and Co-Founder of The Human Sentience Project. She works as a futurist, speaker, and novelist in Tucson, Arizona. As President, Policy Research Methods, Incorporated, Falls Church, Virginia, she was a contractor to federal and state agencies for over 20 years. She lectured in Sociology and Anthropology at Georgetown University, and earned her doctorate at the Ohio State University in 1977. Dr. Rappaport is a prizewinning short story and poetry writer. **Christopher Corbally** is a Jesuit priest and an astronomer with the Vatican Observatory Research Group in Tucson, Arizona, for which he has served as Vice Director and liaison to its headquarters at Castel Gandolfo, Italy. He is Co-Founder of the The Human Sentience Project and an Adjunct Associate Professor at the Department of Astronomy, University of Arizona, and co-author of the book, *Stellar Spectral Classification*. Dr. Corbally is a past president of the Institute on Religion in an Age of Science.

Chapter 11 A World of Quality: Codes of Conduct, Phenomenology of Feeling and Morality in Scientific Research

Angela Roothaan

Abstract The past decades have seen the introduction, in scientific institutions, of codes of conduct that describe good practices of scientific research and clarify which behavior is not to be tolerated. They find their basis in some version of the norms of science formulated by Robert K. Merton in 1942. They tend to have a double effect, on the one hand streamlining procedures and preventing unprofessional behavior, on the other reducing personal responsibility, while externalizing morality in a body of rules. To repair this problem I propose to turn to the so called 'phenomenology of feeling', developed by Max Scheler and improved in an important respect by Stephan Strasser. This approach highlights personal responsibility, while understanding the world as a world of quality, to which we connect through 'value-ception' – the experiencing of value. It promises ways to reconstruct codes of conduct in such a way that they not only focus on rules for behavior, but also stimulate personal responsibility by taking positive values as the condition for a good working climate in science.

Keywords Phenomenology of feeling • Personal responsibility • Codes of conduct • Values and perception • Morality of scientific research • Value ethics

Codes of Conduct – Their Origins in the Sociology of Knowledge

Nowadays, there is no self-respecting scientific institution that does not have a code of conduct, containing rules for, or presenting best practices of, scientific integrity and moral responsibility for scientists. For an example, one can look at *The European Code of Conduct for Research Integrity*, acknowledged by the European Science Foundation and ALLEA (All European Academies), published in 2011. It describes

© Springer International Publishing Switzerland 2016

A. Roothaan (🖂)

Free University, Amsterdam, The Netherlands e-mail: acmroothan@casema.nl

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_11

good practices of scientific research on the one hand, based on the moral integrity of researchers, and misconduct violating such integrity on the other – fraud, plagiarism, and abuse of research subjects and materials. As the main principles or norms that should lead to good research practices it mentions honesty in communication, reliability in performing research, objectivity, impartiality and independence, openness and accessibility, duty of care, fairness in providing references and giving credit; and responsibility for the scientists and researchers of the future (ESF/ALLEA 2011: 5).

Whereas the installation of formal codes of conduct, functioning like a guarantee of quality research, is something of recent decades, the awareness that there are precepts for good science, as for good professional practices, is as old as these themselves. The most famous example from the professional sphere is the oath of Hippocrates, formulating the aims and limits of good medical behavior more than 2000 years ago. Philosophers and scientists through the ages have also formulated principles that should guide good research, but these did not take the form of a professional oath or code of conduct. Reflection on norms for good science took a turn in the twentieth century, when, with the appearance of sociology as a distinct field of reflection and research, scientists and researchers came to be studied as a group in society, with its own cultural norms, roles, and functional relations.

Max Scheler was among the first to contribute to this field, with his study Problems of a Sociology of Knowledge - published in two versions in German in 1924 and 1926, but translated into English only in 1978, thanks to the interest of American pragmatist philosophers in their phenomenological precursors. According to the introduction to the English translation Scheler 'offered the first systematic treatment of the discipline' (Scheler 2013: 23). He aimed at describing the shared 'values and interests' of social groups, i.e. the group 'ethos'- thus going beyond an analysis of 'external, objective structures of knowledge within a group' (both quotions Scheler 2013: 23). If positivistic sociology only looks at what can be observed empirically, i.e. at behavior, the phenomenological approach in sociology searches for intentions and values, i.e. for the source of (moral) agency. Charles Taylor, in his influential study on the Sources of the Self from 1989, named these 'moral sources'. Although Scheler was considered one of the major philosophers of the first half of the twentieth century, his not being translated into English for a long time, and the slackening interest in phenomenology as a form of practical philosophy, hindered the influence of his work on formulations of morality in science - the reason why not his work, but rather that of Merton became standard.

Times were gloomy shortly after World War I, when Scheler wrote his study on knowledge. They had taken on another kind of gloomy quality in 1942, when Robert Merton wrote his classical article on 'The Normative Structure of Science' – the one which formed the inspiration for the codification of morality in science. The totalitarian systems that had such a grip on the world by that time, Stalinism and Hitlerism, had made it an intrinsic element of their power basis to intrude in, and meddle with, what was seen as the basis of knowledge proper – science, and scholarly research in general. Their methods included laying off or even imprisoning independent researchers and replacing them with younger ones who still had to build a career,

and who were susceptible to advantages given for loyalty. The effects of these methods for corrupting independent and objective research could be experienced far beyond the empires from which they originated. To Merton it was 'evident that science is not immune from attack, restraint, and repression [...] [as] local contagions of anti-intellectualism threaten to become epidemic' (Merton 1973: 267). These lines are from an article, originally titled 'Science and Technology in a Democratic Order', which aims to delineate 'true' science and the norms which are at work in it, over against interested and partial would-be science.

Merton belongs to those (functionalist) sociologists who give structures and roles more attention in their theoretical work than values and interests. Concordantly he writes that because of the attack on science scientists have started 'to recognize their dependence on particular types of social structure' (Merton 1973: 267). Although, like Scheler, he searches for the 'ethos' of science, for its values, he describes them as norms that are binding to the individual scientist ('the man of science'), not in their essential or ideal character as such, but in their externalization. This ethos is not codified, writes Merton, but it can be 'inferred from the moral consensus of scientists as expressed in use and wont, in countless writings on the scientific spirit and in moral indignation directed toward contraventions of the ethos' (Merton 1973: 269).

The norms of science are, according to Merton, binding for two reasons: because they describe what scientists should do to produce good science (their methodological function), and because society needs certified, trustworthy knowledge (their moral function). In Merton's account, the ethos of science as it can be seen in the behavior of researchers, boils down to four norms: *universalism* (no partiality), *communism* (the results of science are owned by the community, not by an individual or a corporation), *disinterestedness* (scientists work not for personal ambition or gain), and *organized skepticism* (science is inherently critical of its own results). The fact that they are institutionalized in the social structure of science should be the main defense line over against those ideological powers that attack true research.

Most present day codes of conduct acknowledge their indebtedness to Merton's article, and its distinction of the major norms of scientific research. Although they extend Merton's classification, vary it, and stress to a larger degree the responsibility for those others involved in research (young researchers and research subjects), they all echo to some extent his glorious description of the detached, objective and critical researcher. Whereas it is a common conviction that science is not under threat like it was in the 1930s and 1940s of the twentieth century, there is a growing concern among philosophers and sociologists of science that the classical disinterestedness and freedom of the researcher is under threat. The threat these days doesn't come from individual dictators, nor from bluntly racist ideologies, but rather from diffuse impersonal economic-political power structures (like global corporations, banks, and the governments that support them) that will keep oppressed groups in society down only for the benefit of the most wealthy. Most researchers are still not directly paid by the organizations that embody these power structures, but the way in which society is restructured according to their needs effects increasingly how science is being done.

This process is called the commodification of science, and involves not only issues like patenting and technology transfer, which have a clear economic significance, but also administrative issues like measuring accountability and organizational structures, e.g. hiring researchers and financing projects in an artificial atmosphere of scarcity, competition and survival. 'In recent years, commodification and free market reasoning has advanced in all areas of higher education, science administration and research', wrote Koen Vermeir in a 2013 article in *Science and Education* (Vermeir 2013: 2486). Against this background the codes of conduct appear to be vulnerable defense mechanisms. When scientists and scholars can be 'bought' on a structural basis (not so much by money, but more so by honor, travel and research opportunities, the possibility to hire extra young researchers) – is an appeal to their integrity enough?

The question of the vulnerability of the project of securing good science by codes of conduct, which should guarantee good research practices through a framework that addresses individual researchers who wander astray, arises not only in science, but in other spheres as well. Installing moral codes in other public institutions like the school or the hospital not only made explicit a new professional standard, which should ban random, parochial and paternalistic conduct, but also had the unexpected effect of a decrease in individuals to feel personally responsible for what happens in the organization. Last year there was, for instance, a news item regarding hygiene in hospitals: although the code of conduct clearly describes how and when staff should wash their hands, it seemed that those who complied with the rules found it hard to personally address those who didn't – as good conduct had become a matter not between colleagues, but between each individual and the ethics committee that oversees compliance with the code of conduct. It seemed the case here (as well in other similar cases), that the code of conduct, as an external embodiment of morality, took over from a strong and personal sense of responsibility with respect to good and bad agency. Similar effects can already be seen in scientific institutions.

In the next section I will go deeper into the described vulnerability of codes of conduct as they apply to science. In contrast to the view that their formal adoption will provide a good measure to prevent their violation, I will argue that they have an inherent weakness – for while they focus on good practices and bad transgressions of the rules, they forget the question how actual people get motivated to do the right thing and feel responsible for its social importance. For a possible correction at this point I will turn to Max Scheler's value ethics – an approach that has to be adjusted, however, along the lines sketched by his follower and critic Stephan Strasser. These philosophers developed what has been called a phenomenology of feeling – an approach that sees valuing as the primary way of persons to perceive the world, something they do by feeling. When we take their point of view, that the feeling person is the locus of conscience and responsibility, it becomes clear why codes of conduct do not do what they should do – increase moral responsibility – as they do not address the feeling and valuing person.

Codes of Conduct: Problems, and Possible Corrections

While commuting to work I overheard two young men, working on different research projects in the natural sciences in the hope of obtaining a PhD. They were discussing their working conditions, and I was sorry I could not tape them, as their conversation would be great material for my course in the ethics of science. They gave each other advice: 'Do not design your own research project, as this costs a lot of time, when you have to adapt it after trying it out, and to keep your contract you must have some results after the first year.' 'So use a project which is designed by your professor, it will also give you more chances to get positive results - for although negative results are scientifically just as interesting, they will not help you get a job after this project is finished.' 'Just make sure your name is on an article with four co-authors several times, then you will satisfy the publication demands, which guarantee renewal of your contract.' After exchanging a whole series of such rules for survival in the world of science, they said to each other: 'but of course it is all bullshit, and it is not what we should do, but, hey, what can we do about it?' It is important to note that those two young men were completely aware of the norms that should guide scientific conduct, while they saw it as equally impossible to comply with them. So, what has gone wrong here? The said codes for integrity obviously fail - but why?

One reason has been made clear by philosopher of science Hans Radder, who has written several studies on the commodification of science: that is, 'the economization, or economic instrumentalization, of human activities and institutions, or even entire social subsystems' (Radder 2010a: 4). Like the already-mentioned Vermeir, he points at the ultimate reduction of scientific behavior and its results, scientific knowledge, to economic values. The results of science are measured in quantifiable effects – amount of publications, recognized status of journals, and effects for society (like the production of medicinal treatment, the enhancement of trade or industry, *et cetera*). As for scientific conduct itself, while the codes of conduct stress integrity and moral responsibility, the economization of the scientific project puts pressure on the individual scientists that makes compliance with them very hard.

Radder sees one of the causes of this vulnerability of the codes of conduct in the fact that they focus on the individual scientist, while leaving the structures that provoke fraudulent and/or unscientific behavior intact. 'Commodification, however, should not merely be analyzed and assessed in terms of individual corruption but also, or even primarily, in terms of structural coercion [...]' (Radder 2010b: 250). This appeal certainly addresses aspects of the case described above of the two PhD students. One does not have to doubt their personal integrity – it is clear that 'the system' brings them to their approach of things. To repair the problem, Radder proposes a renewed stress on the Mertonian norms, and the values that they express – but then in the sense that the impulses to comply with them be built into the institutions of science themselves, instead of leaving them to the individual researcher's conscience.

Important as this proposal is, it leaves another aspect out of sight – the question of what values are, and how they inspire persons to moral actions. This aspect is important because it might inform the question of which values ought to be at the core of our codes of conduct. The Mertonian values, and the variations we can find in the said codes, share the characteristic of inspiring discipline (suppressing impulses to help friends, to aim for personal success, to forget one's blind spots, and to make easy with critical scrutiny). It might be the case, however, that values that make for a satisfying social life have stronger binding potential, and tend to overrule the disciplinary ones. As in the case cited above, the young men want to be honest researchers, but their desire for a steady job, which makes it possible to build a home, or raise a family, are stronger than the desire to contribute to really critical science. This would make it important to look for the values that positively inform their behavior, and see if they could possibly be built into more effective codes of conduct.

An analysis which focusses on that question could better address the problem that we see: a decrease in the willingness of individual persons to take responsibility, apart from norms, rules and institutionally-induced attitudes. Codes of conduct prescribe what should be done and what should be avoided in a merely prescriptive manner, as, for example, in the rule to provide research subjects with enough information, or the rule to save research data in a way that they can be checked by others. Formulations such as these do not refer to positive values that could inspire or motivate a person to follow the norms, but solely to their potential to suppress desires for fast success. By positive values I mean values that can be known as positive realities, having an effect on human moral orientation. Scheler holds that 'Whenever we speak of an ought, the comprehension of a value must have occurred' (Scheler 1973: 184). Most important in his reflection on values is that he does not consider them to be 'concepts abstracted from empirical, concrete things, men, or deeds; nor are they abstract, 'dependent' moments of such things.' In contrast 'they are independent phenomena that are comprehended independent of the peculiarity of contents [...]' (both citations Scheler 1973: 185).

Values to Scheler thus are not to be inferred from actual normative behavior of human beings in groups (as Merton held them to be): they can be known by themselves, independent from their expression in practice. Therein lies an important aspect of the phenomenological approach: values are accorded a critical status over against actual human behavior. They are seen as the ideals that inform the norms as well as individual responsibility to interpret the norms in given situations. They transcend the actual rules, thereby making it possible to critically follow them, or even go against them when they seem to be formulated imperfectly and lead to bad practices, in professional or scientific spheres in the actual world alike.

When we then ask how a person interacts with values – how he or she knows them or interprets them to apply them in real life – we find in Scheler's phenomenology the answer that this is done through feeling. For his wider view on this, I will turn to the work that contains his groundbreaking critical reconstruction of the dominant Kantian formal ethics into what he called a 'material ethics of values'. This concept has been translated in its English version as 'non-formal' – probably to avoid its misconception as being 'materialist'. The difference between the Kantian and the Schelerian approach lies in the fact that Kantian ethics sees formal reasoning as the criterion for finding moral direction, whereas phenomenological ethics searches for it taking the human being in its entirety into account – that is, not only as a reasoning being, but also as a feeling, embodied, spiritual being.

Between 1913 and 1916 Scheler's *Formalism in Ethics and Non-Formal Ethics of Values*, containing his corrective to Kant, was published. Here we find his proposal to understand feeling (a richer concept than emotionality, which is commonly understood as intentional feeling) as having different levels, ranging from preintentional, sensory feelings through intentional emotions to what one could call meta-intentional spiritual feelings. In feeling value we experience the world in the most primary way. Perceived value creates perspective or depth in our world, ranging objects before us as more or less beautiful, attractive, important, *et cetera*. Scheler distinguishes

[...] four well-delineated *levels* of feeling that correspond to the structure of our entire human existence. These are (1) *sensible feelings*, or 'feelings of sensation' [...], (2) *feelings* of the lived body (as states) and *feelings of life* (as functions), (3) *pure psychic feelings* (pure feelings of the ego), and (4) *spiritual feelings* (feelings of the personality) (Scheler 1973: 332).

These levels, or strata, are distinguished not just with respect to their content, but also in 'depth' – referring to their closeness or distance to a 'surplus' emanating from the positive values that to a varying extent permeate the being of a person. Bliss and despair are the examples Scheler gives of 'feelings that permeate the being of the person himself, feelings that are beyond the will of the person; and therefore they reach into and codetermine *everything that the person acts out*' (Scheler 1973: 349).

We see here that Scheler added further complexity to his phenomenology of feeling by stressing that value perception is inherently personal, that is, varied according to the unique manner each person feels and experiences the world in its own style. Therefore the person, says Scheler, is the locus of conscience, whereas the stratified levels of valuing determine the moral quality of personal life. The lower levels are more easily subject to the will, while the higher, more spiritual, ones should be seen to inform the character of the person, and thereby give direction or orientation to his or her morality. For the problem of the failing of codes of conduct in science, we find here valuable insights. In the case of the PhD students, I noticed, the problem is not that they fail in awareness of moral rules and obligations, but that something else has prevalence over their will to comply to the rules. This 'something else' now can be characterized as the working of the values that inform their personality. The deeper values or sources of morality are the least subject to willing. Therefore, if we want them to influence the way scientists go about their business, it is not enough to appeal to personal integrity and rule-following - it should be looked into how individuals can be brought to connect to their deepest values.

Feeling Value and Personal Responsibility

The importance of Scheler's work, which did not have the influence in ethics it deserves, lies in the fact that when understanding morality we still live in the shadow of Immanuel Kant (1724–1804), who saw obedience to the right moral rules as the core of morality, and who thought we can find such rules by trying out whether they hold up for the court of all humankind. Thus he came to formulate his famous categorical imperative: 'choose only such maxims as rules for your actions as you would want others to choose also'. The idea that human beings, as rational beings, have a free will makes it possible for them to follow the right moral rules. Although most ethicists would agree that the Kantian deduction of the categorical imperative from the idea of the freedom of the will makes it very clear what ethics is essentially about, they have sought varying ways to connect this abstract argumentation, which is very hard to apply in actual life, to more empirical views of human behavior and ways to direct it morally. One of the problems of the Kantian view in this respect is that, as Scheler discusses in his work, the moral person is not seen as a concrete individual, but as an abstraction, and thereby as a general person (me, in so far as I am reasonable). Everything in me which is not reason should be abstracted, which leaves the good will of Kant without connection to everything that makes me myself.

Max Scheler, as I already described above, corrected Kantian ethics substantially. In order to connect ethical reasoning to actual conduct, he believed, one should rely on phenomenology, anthropologically understanding human beings' potential for moral orientation, instead of their ability to choose and follow a moral rule. In other words, we should not start from the question what 'a good will' would choose, but from the question of how a will can be informed by values to be good. People motivate their actions with respect to values, which are, according to Scheler, part and parcel of historically and culturally situated religious views on the meaning and goal of human life. Although he develops his basic theory of ethics as '[...] independent (and valid independently) of all philosophical investigations into religion and religious ethos [...]' (Scheler 1973: 595), he supposes that the given finitude of the person leads one to suppose the types of a 'value-person' (a saint, or a hero, for instance) as perspectival sides of what people understand to be 'God'.¹

The levels or strata described in the preceding section each know their own type of valuing – from pain *versus* pleasure, through sadness *versus* joy, to bliss *versus* despair. Feelings of value do not produce morality, nor do they demand it: they *draw* persons toward realizing more or less high moral behavior – they can be seen as

¹In his approach, therefore, one does not have to treat religious views (as they are done in the still influential positivistic scheme) as imperfect precursors of the scientific worldview, but can see them as expressions of the way human beings, through feeling, perceive their world, their relationships, and their place in it.

sources that orientate the will.² 'Only the *blissful* person can have a *good* will, and only the *despairing* person must be *evil* in his willing and actions' (Scheler 1973: 348). Thus Scheler restores spirituality to ethics, where Kant had made a sharp distinction between the question 'what should I do?' and 'what can I hope for?', leaving all considerations on religion and/or spirituality to the latter – to the field of the meaning of life. Also, to Scheler, the spiritual realm is not completely transcendent and only something to be hoped for. Although its ultimate source ('God') is what we call transcendent, in experiencing spiritual values, the person actually forms his or her character here and now.³

From a Schelerian perspective, we should acknowledge that there can be no good will unless there is a real and positive experience of the highest value (which is the feeling of bliss), since 'all good volitional directions have their source in a *surplus* of positive feelings at the deepest stratum; all 'better' comportment has its source in a surplus of positive feelings at a comparatively deeper stratum' (Scheler 1973: 349). Thus Scheler explains the possibility of a moral heroism that can sacrifice direct goods, because this source – bliss – makes bitter consequences good beforehand. If this is so, a moral formation would be needed, which makes the experience of such a rich positive spiritual feeling more likely to happen, instead of one that just focuses on learning to discipline oneself in order to be able to follow the rules one can perceive to be right.

Here one should however also point to the possible negative consequences of Scheler's anthropological ethic. A surplus of positive feelings might also rest on some false ideology, and the resulting heroism become a self-righteous terrorist attack on other vulnerable human beings. If this was perhaps not yet easy to perceive, not even in those horrible war years of 1914–1918, it became inescapably clear after the next world war, especially as it made genocidal and political mass killings possible. In the works of Emanuel Levinas, Hannah Arendt, and others, we see therefore an attempt at an alternative ethics, which relativizes the independent, autonomous moral agent, and stresses the weight of vulnerability, and of the other. Arendt stresses, for instance, that we need the other to be forgiven: 'Closed within ourselves, we would never be able to forgive ourselves any failing or transgression because we would lack the experience of the person for the sake of whom one can forgive' (Arendt 1998: 243).

²Charles Taylor, who got much attention in the 1990s of the twentieth century with his *Sources of the Self*, uses Scheler's terminology, adding to it the category of 'hyper-values'. Strangely enough, the name of Scheler cannot be found in the extensive index of that work. The same goes for another thinker whose ideas resound in Taylor's work, William James.

³Scheler himself mentions William James as one of his sources. Here we see the distinctive influence of James' explorations of the self and the spiritual. Cf. 'Individuality is founded in feeling; and the recesses of feeling, the darker, blinder strata of character, are the only places in the world in which we catch real fact in the making, and directly perceive how events happen, and how work is actually done' (James 2002: 351).

Another attempt to correct the emphasis on the independent moral agent can be found in *Phenomenology of Feeling* by Stephan Strasser, which builds on the work of Scheler, but criticizes the strata-theory of feeling, and stresses the complete coincidence of 'lower' and 'higher' levels of feeling and thinking in the human being.

Strasser also criticizes the Schelerian idea that personal moral development is a process of purification or interiorization, of coming nearer to the deepest value source. Instead, he argues, morality should always remain connected to everyday, 'superficial' pleasures, like enjoying your home life, being with your loved one, or having a good meal. Although he chooses a way that is similar to that of Scheler, investigating in a phenomenological manner the feeling and valuing nature of the human person in order to find the source of morality, and even stretching this investigation to the level of religious experience, the outcome of his approach is different, and so is his understanding of the spiritual or religious experience which forms its orientation point.

Where Scheler holds that the infinite God co-contains the types (the hero, the saint, the spiritual leader) of the value-person (Scheler 1973: 588), but still transcends them, Strasser denies the opposition of the infinite and the concrete, as 'we experience the infinite precisely *in* the concrete and *with* the concrete' (Strasser 1977: 348). There is no experience of the divine beyond the here-and-now. He gives the example of a man who is happy with his wife. It would be absurd if he were to understand this happiness under abstraction from the uniqueness of *this* woman. Still he experiences infinity – as every happiness, according to Strasser, is 'transcending anticipation' (Strasser 1977: 373). A 'transcending vision of superabundance' is produced by the concrete, finite thing itself – this is (in my words) the mystery of the presence of the infinite in the finite (Strasser 1977: 348).⁴

Thus, with Strasser we must contend that what is deepest is also simultaneously superficial. Strasser's example of a man experiencing the bliss of deepest love in the concrete contentment and pleasure of being with this woman, makes clear that no high moral ideals will work if they do not connect to concrete situations that are deeply gratifying. The consequence for the ethics of value is that moral formation should be directed at making individuals more prone to value perception, and not so prone to a so-called purification, toward so-called higher values, that this suppresses the lower desires for satisfaction of individual emotional and sensitive needs. The more spiritual values cannot be considered without their dialectical relationship with the sensitive and emotional ones. Similarly, our young researchers can be understood to be bound to feelings of bliss in their own versions of more or less emotionally safe, fulfilling relationships, at home and at work – which drive them to seek a means of living, a tenured job: a deeply personal drive that is stronger than the will to follow a moral rule.

⁴This move, by Strasser, prevents a possible terrorist use of the phenomenology of feeling, and although he expressly inscribes his view, like Scheler does, in Christian discourse, I see here rather an echo of the Talmudic saying that to save one human being is to save a whole world. In other words: there is no bliss beyond our concrete human relations.

Experience of Value, Moral Formation, and Improved Codes of Conduct

In the light of the above we can return to our central question – how to improve the positive effect of codes of conduct on scientific integrity, informed by the phenomenology of feeling. There might be two kinds of effect flowing from the above reflections. On the one hand, we can understand that failing to follow codes of conduct does not follow *per se* from failing in moral character, but from attachment to deeper values, which overrule the rules – which didn't take the reality and importance of this attachment into account. On the other, our discussion of the phenomenology of feeling should make us aware of the way in which positive values, and value-ception, make us understand the world primarily as a world of quality. Ignoring this basicality has led to the installing of codes of conduct that do not refer to the most powerful positive values, the ones that relate (also) to the spiritual nature of the feeling person.⁵ To conclude I will point out, summarizing the above, what these two effects can mean for a possible improvement of the standing of codes of conduct, as well as for seeing the need to include in moral formation the orientation of human being's spiritual nature.

First, when we look at the discussion of the two PhD students, we must conclude that they actually know very well what would be the right approach to their job – the norms that should guide their research are something they are clear about. All the same, they feel these norms to be overridden by other realities, which in the last resort rest on the drive (conation, as it is called by Scheler) to build a life for themselves, with their loved ones and in working relations – a home, which rests upon a steady income, as well as a secure workplace with colleagues, both of which depend in their case upon good evaluations in the scientific world – which again depend upon doing what the system, and/or their professor, demands of them. Of these realities one could say that they corroborate Scheler's view that the more one values something, the less one's free will is involved. They can will to follow a norm, but they can hardly will to risk having a home and a decent life.

Concerning the relation of moral formation and our understanding of the world as a world of quality, we might – for a contrast to what the phenomenology of feeling has to add – look at the thought of Aristotle, who provided the view that most influenced European thinking on moral formation. Aristotle distinguished two conditions which should make moral formation possible: training, by mentors, in good moral practices; and good laws to provide a larger sphere to direct the mentors, as well as ourselves, in our striving for morally sound attitudes. What Aristotle omitted was profound research into the question of what values guide our 'oughts', or: how do lawmakers find the right principles to transfer, by way of law, to the people?

⁵This doesn't leave out what Scheler called the 'lower strata' of sensitive, living and psychic feeling. I follow Strasser in his view that the strata should be seen as 'moments' in the feeling life of human beings, which are at work simultaneously and interconnectedly. When I therefore stress the spiritual moment, this is solely because it has been left out in most ethical reflection since Kant.

Although in introductions to ethics Kant and Aristotle are often opposed, for purposes of instruction, we should stress that this omission of Aristotle already prepared the ground for Kantian formalistic ethics to grow on. The opposition is normally construed on the absence of any theory of formation in Kantian ethics, thus forgetting that Aristotle left the question of what a good moral orientation should look like lying open. This was an omission which was taken over by Kant.⁶

Scheler took a radically different turn on this point. He did try to sketch the values that have morally binding character, and took inspiration in the Christian tradition – without making Christian belief a prerequisite for understanding or accepting his ethics. As pointed out above, he built his ethical theory, which, it should be marked, was meant to 'establish a [...] positive foundation for philosophical ethics [...]' (Scheler 1973: xvii), and not a normative ethics as such, on purely philosophical grounds that could, or at least should, be able to stand on their own. He introduces 'God' in a phenomenological manner, not making reference to scripture or theological tradition – referring to human awareness of an absolute (somehow personal) source of total goodness. I purposively attach the quotation marks to make this clear. This led to his indicating that God as an infinite person transcends all concrete, human, modelling of goodness – while at the same time this modelling is always inspired by the (unattainable) aim of being god-like: '[...] the intended Divine (factually) becomes the point of departure for all other functioning model types – [...]' (Scheler 1973: 589).

Aiming for a divine example (*imitatio Dei*) is not the same as developing one's moral character with an eye to good laws (the Aristotelian definition of moral formation). The difference of Scheler's approach to that of Aristotle is that it makes use of the imaginative, feeling, 'value-cepting' potential of the human being – which makes it rest, not on the rational willing faculty, nor on the potential to learn by habit, but rather on the quality of value that should attract one's feeling for it to be called good. Phenomenological ethics thus lays the center of morality outside the ego. Moral formation inspired by it must direct itself not so much to disciplining oneself, but instead to developing the value-ceptive, feeling, imaginative potential of the individual. The PhD students have got *this* right, of course, that, humanly speaking, the values of a home life and a secure workplace transcend abiding moral rules that do not relate to such elementary values. Following Strasser, however, the simple bliss of what they strive for shows the presence of the superabundance of the infinite.

When we take Scheler's and Strasser's approach as an inspiration to transform the codes of conduct where they fail, we should try to found them in deep positive values that express the so-called superabundance of the absolute source of goodness. This makes it possible to draw those for whom the codes of conduct are meant

⁶I mention only Aristotle and Kant because they are the two thinkers who delineated the frameworks which determine most of today's ethical debates. Traditional Christian moral philosophy, especially that of Thomas Aquinas, of course knew what Christian morality should take for its final values. All the same, Aquinas also discussed general, non-Christian, human morality (natural law) – which he founded in what we would today call the biological make up of human beings.

toward such positive values, instead of only inspiring them to discipline their primary interests. To put it differently, referring to Strasser: good moral codes should not create a potential conflict between morality and interest, or between 'lower' and 'higher' values. They should formulate values in such a way that the ones are in harmony with the others, making a connection to the transcendent, infinite source of morality possible.

This would mean that we should transform the codes of conduct in such a manner that the perception of human life inspired by spiritual values, that is a social and homely life with others in friendship and love, as well as a safe and secure working environment (thus expressing the perception of the world as a world of quality) will inspire the rules for good science, and form their limit too. Let us give it a try. It would mean that those principles that ask not for feeling but for discipline (such as independence, objectivity, duty of care, impartiality and honesty, that are now central in codes of scientific conduct), should be transformed into positive versions that express the transcendent surplus of happiness. Thus they should lose their negative, disciplining character, and stop creating a conflict with the deep values that inspire moral agency. They should become positive incentives for (in respective order): mutual support, trust in oneself, passion to care, choosing for those who need help, and speaking the truth. Such values do not create a conflict between the 'personal' and 'professional' spheres, between personal responsibility and professional behavior – as they make it possible to form them both along the same lines. I imagine that taking such positive values as a lead to critically addressing standing norms for good science, as well as the frame to create concrete incentives for good scientific practices, could take our codes of conduct to another level of connectedness to moral orientation. And take our actual scientific practice there, too.

Bibliography

- Arendt, H. (1998). The human condition (2nd ed.). Chicago: The University of Chicago Press..
- European Science Foundation, & ALLEA. (2011). The European code of conduct for research integrity. http://www.allea.org/Content/ALLEA/Scientific%20Integrity/Code_Conduct_ ResearchIntegrity.pdf. Accessed 31 Aug 2014.
- James, W. (2002 [1902]). The varieties of religious experience. A study in human nature. London/ New York: Routledge.
- Merton, R. K. (1973). The normative structure of science. In R. K. Merton (Ed.), *The sociology of science. Theoretical and empirical investigations*. Chicago/London: The University of Chicago Press.
- Radder, H. (2010a). The commodification of academic research. In H. Radder (Ed.), *The commodi-fication of academic research. Science and the modern university* (pp. 1–23). Pittsburgh: University of Pittsburgh Press.
- Radder, H. (2010b). Mertonian values, scientific norms, and the commodification of academic research. In H. Radder (Ed.), *The commodification of academic research. Science and the modern university* (pp. 231–258). Pittsburgh: University of Pittsburgh Press.
- Scheler, M. (1973 [original German edition 1913–1916]). Formalism in ethics and non-formal ethics of values. A new attempt toward the foundation of an ethical personalism. Evanston: Northwestern University Press.

- Scheler, M. (2013 [original German edition 1924 and 1926]). Problems of a sociology of knowledge. Abingdon/New York: Routledge.
- Strasser, S. (1977 [original German edition 1956]). *Phenomenology of feeling. An essay on the phenomena of the heart.* Pittsburgh: Duquesne University Press.
- Taylor, C. (1989). Sources of the self. The making of the modern identity. Cambridge: Cambridge University Press.
- Vermeir, K. (2013). Scientific research: Commodities or commons? Science & Education, 22, 2485–2510.

Angela Roothaan works as assistant professor of philosophy at VU University Amsterdam. She is the author of five books (on Spinoza's Theological-Political Treatise, on nature in ethics, on truth, on spirituality and on ghosts/spirits in modernity) and numerous articles on the interconnected fields of ethics, spirituality, political theory, religious epistemology – all inspired by questions concerning modernity.

Part III Reflections on Emotions from Theological Perspectives

Chapter 12 Towards a Biblical Theology of Emotions

Cardinal Gianfranco Ravasi

Abstract This paper notes the wide range of emotions which are found within the various texts of the Bible, and explores how a 'grammar of emotions' may be derived from them. It notes the ways in which emotions in the scriptures are distributed around various organs of the human body, and it explores two emotional extremes – anguish and tenderness – as they are related to Jesus, and to God.

Keywords Bible • Emotion • Desire • Organs • Anguish • Tenderness

Introduction

'Like the one who has set out to sea in a small boat is filled with immense anxiety, as he is entrusting a small piece of wood to the immensity of the waves, so also we are apprehensive as we venture into such a vast ocean of mysteries' (Origen, PG 12, 210). A tension similar to the one expressed by Origen on the threshold of undertaking a homiletic commentary on the Book of Genesis is experienced by the one who wishes even to attempt a sketch of a biblical theology of emotions. Two reasons stir up this fear. On the one hand, there is an enormous fluidity regarding the definition and classification of emotions. In a study published in 1981, two researchers at the Georgia Southern College listed no fewer than 92 definitions in which they pooled together 9 skeptical statements about the possibility of defining such a variable reality, engaged in the Bible – as we shall see – by a lexically and symbolically complex and varied constellation (Kleinginna and Kleinginna 1981).

On the other hand, this human process with many components may be seen throughout the pages of the Bible with an impressive wealth of imagery, and one would not be able to compress it into a rigorous theoretical mold: beginning with the aesthetic emotion of the Creator contemplating the beauty/goodness (tôb) of his work in Chap. 1 of Genesis, right up to the tension that rules supreme on the last

C.G. Ravasi (🖂)

Cardinal-Deacon of San Giorgio, Velabro, Rome, Italy e-mail: t.trafny@stoq.cultura.va

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_12

page of the Book of Revelation, in which there is a yearning for the coming of Lord Jesus (22: 17, 20). Between these two extremes sprawls a real album of emotions which it is difficult to catalogue. It is a chromatic emotional spectrum that goes from the frigid violet of anxiety or fear, through to the warm red of joy or tenderness. Therefore we are obliged to proceed only through selective surveys or through emblems (for example, the Psalter in itself could generate a vocabulary spanning the whole arch of human emotions).

The Human and Divine Emotional Horizon of Scriptures

We begin, then, by outlining in a very broad and 'impressionistic' way the horizon which we seek to encompass. Later, we will choose some paths into which we shall venture. We have spoken above about the fluid mobility in the category of emotions, because of which not infrequently synonymous words and realities are adopted which in fact are varied and diverse. Let us just scroll through this lexical list: emotion, passion, desire, feeling, affection, moods, attitudes, instinct, impulse, inclination, disposition, attention, aspiration, excitement, impression, deep sentiment, turmoil, apprehension, uneasiness and so on. Or, if one wished to make an inventory divided into two columns with the respective positive and negative dimensions of emotions, one would end up with another endless classification.

On the positive side one could, for example, place pleasure, affection, *eros*, tenderness, sympathy, compassion, respect and so on. In the negative slot, we can include displeasure, antipathy, hatred, horror, cruelty, porn, disgust, nausea, repugnance, contempt, indifference, disinterest, and so on. More specifically, but equally complex, would be an analysis of the attention to emotions that some literary exegetical methods apply to the biblical texts. We refer to the rhetoric, both classical as well as modern, which in the structural *dispositio*, in the stylistic *ornatus* and in various textual forms assigns a rate of performativity, specifically even an emotional influence, on the hearer-reader. We could also refer to the narratology that takes into account the concurrent presence in a literary work both of the author, with his emotional baggage, and of the reader, who is involved by adherence to the plot.

This horizon is so multiple and mobile (rather like a kaleidoscope), and is by its very nature so dynamic, that every emotion has different emphases and degrees according to the different personalities of the human subjects experiencing them. It is interesting to note that in the Neo-Latin languages, as also in the Anglo-Saxon ones, the vocabulary used to define this vital experience has movement as its basis. From the Latin verb *movere* are derived 'emotion, commotion, emotional': there are cognates of these words in French or Spanish; while '*commuovére*' means 'to move'. A similar semantics governs the German 'Gemüt'sbewegung' which evokes precisely the movement ('Bewegung') of the soul ('Gemüt'), while evocatively 'bewegen' can indicate both 'move' in the spatial sense or 'move' in the emotional sense, and 'Bewegung' denotes both 'motion' and 'emotion'.

Although its emotional vocabulary is more symbolic in nature, as we shall see, it is a fact that the Bible offers an immense panorama of experiences that can be said to be in the category 'emotion' and its corollaries. The God of the Bible – unlike the Aristotelian immovable Mover, or the Greek Fate – is a 'passionate' God, who knows tenderness and passion, disappointment and bitterness, joy and sadness (Gen 6:6; Psalm 78:40), who passes from laughter to anger (Ps 2: 4–5), and who knows the jealousy of love and the trepidation of betrayal. So it is with Christ, to whose emotionality we will return: his empathy with humanity is connected to his incarnation. 'For we do not have a high priest who is unable to sympathize with our weaknesses, but we have one who in every respect has been tested as we are, yet without sin' (Heb 4: 15).

Similarly, humans in the Bible do not have as an ideal the achieving of a state of *apátheia*, as exhorted both by Epicurean and Stoic philosophies. In this regard, the book of Job can be considered as a true and proper atlas of the emotions and feelings that move and stir in the dark areas of trial and of human suffering. These experiences are assumed by the sacred author as the outlines of an anthropology but also as a way towards theological knowledge, so much so that their extreme outcome is theophany ('I had heard of you by the hearing of the ear, but now my eye sees you', Job 42:5). The emotional state is transformed, therefore, into a way of learning and meeting God, thus becoming a structural component of faith. Without being exhaustive, but proceeding only by way of example, we may collect and order some emotional typologies in the Bible.

Thus, we may consider the strange inner dialogue of the person praying, as found in the antiphon that embellishes Psalm 42-43, portraying an 'I' which is in a state of emotion: 'Why are you cast down, O my soul, and why are you disquieted within me?' (Ps 42: 6, 12; 43: 5). Further examples of this are the 'confessions' that Jeremiah embeds in Chaps. 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20 of his prophetic book (cf. Barbiero 2013; Bordoni 1982). We may also note the basic but incisive representation of the impulse for violence generated by envy in Cain (Gen 4: 1-8), with its clarification of the dialectics between the primal instinct and conscious will: 'sin is lurking at the door; its desire is for you, but you must master it' (4: 7). Many pages of extraordinary psychological subtlety are devoted to the sexual impulse, beginning with David, who is fascinated by the beautiful naked Bathsheba (2 Sam 11: 2), to the point of his falling into complete moral blindness. There is a pointed analysis of the transition from amorous passion to hatred in Amnon, who is overwhelmed by the erotic urge for his half-sister Tamar: having raped her, he 'was seized with a very great loathing for her; indeed, his loathing was even greater than the lust he had felt for her' (2 Sam 13: 14–15).

The pairing of *eros* and violence occurs in intense forms in the story of the attempted violence of the Sodomites (Gen 19) or in the macabre story of the rape of the Levite's concubine in Gibeah (Judg 19) or in the more subtle text featuring Susanna being subjected to the desires of the two elders (Dan 13). We might continue with the famous description of the depression that overcomes Saul, with the characteristics of persecution mania (cf. 1 Sam 18–26). This emotional dejection, in a weaker form, is repeated in the story of King Ahab, who is embittered by Naboth's

refusal to sell to him his vineyard (1 Kgs 21: 4: 'He lay down on his bed, turned away his face, and would not eat'). Then we have the terror that invades another king, Belshazzar, in the face of the mysterious hand which writes on the wall a nefarious oracle (Dan 5). And finally we have the explosion of guilt and remorse that leads Judas to suicide (Mt 27: 3-10).

Let us conclude this broad but incomplete exemplification of the phenomenal multiplicity of emotional experience offered by the Scriptures with an episode which is very evocative, and which is at the heart of the powerful story of Joseph in Egypt. Initially he was able to control himself: 'he treated [his brothers] like strangers, and spoke harshly to them' (Gen 42: 7–8). But then the emotional level rises, on account of which 'He turned away from them and wept' (42: 24). Later, facing little Benjamin, the son of his own mother, Rachel, Joseph 'hurried out, because he was overcome with affection for his brother, and he was about to weep. So he went into a private room and wept there. Then he washed his face and came out; and controlling himself' he ate with all his brothers (43: 30–31). But in the end, the wave of feeling was so strong that 'Joseph could no longer control himself ... [he] made himself known to his brothers. And he wept so loudly that the Egyptians heard it' in front of the shocked and upset brothers (45: 1–3).

Knowledge, Emotion, Passion

After this overview of the emotional phenomena which are present as a common thread in the Scriptures, we will now try to set up a more systematic discourse around the structural anthropological categories that derive from the psychophysical unitary condition of the human person according to the Bible. Human existence is seen, then, not only as spiritual and rational but also as sentimental, emotional, passionate – for what another great poet Giacomo Leopardi asserted in his song titled *Aspasia* (1835) is true of people in the Bible: 'A life bereft of affections/and love's sweet illusions, /Is like a starless night, in winter's midst' (author's translation). One who does not have emotions is a 'wintry' being, frigid and gloomy. As noted by Ivan Illich, one contemporary drama is the 'loss of senses', which is paradoxically manifested in an oscillation between the two extremes of a sensory materialistic and carnal bulimia, and an abstract anorexia linked to the senses which are consequently almost digitalized or reduced to a prosthesis, as is pointed out by Marshall McLuhan.

We will seek now to construct a grammar of biblical emotional feeling. We will start from the basic structure that has as its foundation a general biblical epistemology. As is known, the Bible offers the reader many symbols. It therefore presents unitary and polymorphic ideas concurrently, and it is able to produce a harmony between thinking, willing, feeling and acting, i.e. between the intellectual, volitional, affective and effective dimensions. What in modern Western epistemology is separated in rational, psychological, philosophical, scientific, ethical, aesthetic and religious-mystical approaches, is in the Semitic conception (and not only there) brought together in the same human cognitive experience. Enlightening in this regard are the semantics of the Hebrew verb jd' (which occurs 1119 times in the Old Testament) and of the New Testament Greek verb *ghinoskein* (222 occurrences), denoting a 'knowing' that can stretch into the sexual act as a final consequence of interpersonal knowledge (cf. Mt 1: 25) and which extends to complete personal identification (cf. Jn 10: 14–15, 17: 3: see Schottroff 1978; Schmithals 2004).

In this light, the 'reasons of the heart', to use Pascal's famous phrase, are distinct but not separate in any cognitive act of one and the same person. For this reason, in a description of active human subjectivity in its knowledge, consciousness and choice, in addition to rationality, we need to attach a galaxy of feelings. Simplifying the map of emotional expressions, as it has been outlined by modern analysis, we will now discuss some structural components. The first concerns a distinction between two inter-related elements. On the one hand, is *emotion*, which we consider as an instant subjective reaction that arises from the relationship between a person and a salient and incisive event, able to involve the entire psycho-physical knowledge that we have mentioned above? If so, it becomes an act of epiphany, because it blossoms from an event that is addressed to us, embraces us, involves us and even overwhelms us. Of course, the resulting reaction may be antithetical to this: the event may generate adherence, action, feeling, but it can also produce repression, rejection, incapacity to act.

On the other hand, the initial emotion can induce and stabilize in a person a lasting and even permanent reaction, becoming constitutive of that person's being: it becomes a *passion* that can acquire greater or lesser variety, according to its continuation in time, throughout a person's life. It also can generate two antithetical outlets, becoming virtue or vice. In our analysis, we will certainly not be able to develop this process in a clear or articulated way: the treatment, for example, of the seven deadly sins would require a huge documentary dossier. We will content ourselves in identifying only some emotions that can easily verge on passions following their subsequent development.

The Dark and Bright Object of Desire

After this first structural distinction between emotion and passion, it seems useful to propose another important component that occupies much space on the biblical horizon: *desire*. It can be considered the radical motor of human knowing in its totality – rational-sensory-operative – and therefore also of emotion and passion. It is a vital energy that arises from the discovery of one's own creaturely limitation, and the relative willingness to overcome it, leading towards the beyond, and the other – or, rather, to the Beyond and the Other *par excellence*: to the eternal, the 'infinite', the transcendent, the absolute, the divine (it is not without reason that the word 'desire' refers back etymologically to *sidera*, 'the stars'). The Bible presents it as the fundamental source of all human 'knowing', as a manifestation of personal freedom and as a crossroads of morality. In fact, in the Yahwistic version of

creation, 'the woman saw that the tree [of the knowledge of good and evil] was good for food, and that it was a delight to the eyes, and that the tree was to be desired to make one wise' (Gen 3:6). It has, therefore, both an emotional-sensory aspect (taste and sight) and an intellectual and psychological side (wisdom), as well as a moral dimension (the knowledge of good and evil).

The fundamental Hebrew word for desire is *hmd* which is associated with '*wh*: examples are the ninth and tenth commandment, 'You shall not covet (*hmd*) your neighbor's house; you shall not covet (*hmd*) your neighbor's wife ... neither shall you covet (*hmd*) your neighbor's wife, neither shall you desire ('*wh*) your neighbor's house ...' (Exodus 20: 17, Deuteronomy 5: 21) (Ravasi and Tagliapietra 2010; Gerstenberger 1987). The New Testament term is *epithymía* which is based on *thymós*, in its turn based on the Indo-European *dhu* that evokes the swirling of air in a vortex and supposes a violent motion and therefore an uncontrollable desire (Büchsel 1968; Hübner 2004). Contrary to contemporary conceptions, biblical desire (see in particular Mt 5: 27–30 and 6: 21–23) is not reducible to a vague emotional reaction in front of an attractive subject/object, but rather is considered in its quality of a true and proper life choice. It is an ethical decision, an intentional and practical project. It is aiming at a reality to achieve it, consecrating mind, will and action to this idea. In practice, it is a confirmation of the global symbolic conception that we have described, applied to the volitional dimension.

Desire, likes its corollaries, emotion and passion, reveals two faces. There is the perverse darkness of desire which culminates in temptation and sin. It is summarized in the Epistle of James: 'one is tempted by one's own desire (*epithymía*), being lured and enticed by it; then, when that desire (epithymía) has conceived, it gives birth to sin, and that sin, when it is fully grown, gives birth to death' (James 1: 14-15). Paul, in particular, points the finger at the degeneration of desire, so much so that for him epithymía is essentially a negative category (Rom 1: 24; 6: 12; 7: 7 Gal 5: 24; Col 3: 5: 1 Tim 6: 9: 2 Tim 3: 6; Tit 2: 11-12: 3: 3). In particular, epithymía sarkós - where sárx, 'flesh', is obviously to be understood in the Pauline sense as a negative principle that leads to sin – is the culmination of this degeneration. Christians are therefore told: 'Live by the Spirit ... and do not gratify the desires of the flesh. For what the flesh desires is opposed to the Spirit, and what the Spirit desires is opposed to the flesh; for these are opposed to each other' (Gal 5: 16-17). A similar perspective is also present in the Johannine literature: the desires of someone are branded as being of the one who has the devil for father, and these desires lead to murder and lies (Jn 8: 44, cf. 1 Jn 2: 16-17).

There is, however, a bright area where desire is 'in-finite' because it aspires to the divine infinite. In the invocation 'Thy Kingdom come!', we have the idea of a kingdom which must be sought and desired before any other reality (Mt 6: 33). In the Old Testament, faith is already described as a desiring and a searching that arrives at an outcome of communion: 'Seek the LORD while he may be found! ... When you search for me, you will find me; if you seek me with all your heart, I will let you find me' (Is 55: 6; Jer 29: 13–14). The faithful are defined as those who 'seek the Lord' (Is 51: 1). Theirs is an almost physical desire for God, because the *nefeš*, which concomitantly is 'throat' and 'soul', thirsts for God (Ps 42: 2–3; 63: 2; Am 8: 11).

However, it is interesting to note that in the Bible, the primacy is to be assigned to the desire of God himself towards his creature, a yearning that precedes, exceeds, and fulfills the human desire: 'I was ready to be sought out by those who did not ask, to be found by those who did not seek me. I said, 'here I am, here I am,' to a nation that did not call on my name' (Is 65: 1; cf. Rom 10: 20). 'Before they can call I will answer, while they are yet speaking, I will hear' (Is 65: 24). Meaningful is the parable of the lost sheep who is sought by the shepherd, as well as the Pauline Road to Damascus or the invocation of the Psalm: 'Seek out your servant' (Ps 119: 176) (cf. Strola 1999, 2000, 2003, 2010).

This strong theological and mystical connotation – objective and subjective – of desire does not mean, however, that in the Bible the purely human dimension is absent. The Song of Songs is extraordinary in this respect, able to weave together sexuality, *eros* and love, carnal desire and spiritual longing, the embrace of bodies and the meeting of souls. The whole poem is spanned by desire, right from the initial passionate kiss (1: 2–4) to reach – even through gloom, and the diminution of desire (3: 1–5 and 5: 2–6: 3) – to the final scene, which is a new beginning: the insatiability of desire leads to a tireless pursuit (8: 14). The desire of love is presented as a constant swing between presence and absence, possession and conquest; the goal is never final, because the 'in-finite' tension underlying desire is not quenched by a mere carnal possession but, rather, tends towards a transcendent fullness. This is the main thread of desire that runs through the Song of Songs. As Lacan writes, 'if you have to establish the notion of the Other (with a capital O) as the place of the word, it is necessary to affirm that, man being an animalistic prey to language, his desire is the desire for the Other' (Lacan 1974).

Heart, Intestines, Kidneys, Nose and Liver: The Organs of Emotion

Having outlined the structure of emotion-passion-desire according to biblical categories, we will now need to undertake a specific examination of the organs that govern the emotional output of the human person. Naturally, at the basis of this there always lies a unitary psychophysical anthropological conception, which is taken from scriptures and which uses physiology in a symbolic way. On another level, there are five organs involved, and we now present them in regard to the function that they exert in relation to emotional experiences.

The main organ of interiority in the Bible is the heart: its significance is evident also on the lexicographical level, because the Hebrew and Aramaic *leb/lebab* occurs 860 times, whilst in the New Testament *kardía* occurs 156 times. Practically, by 'heart' is denoted the 'I' in the exercise of its inner capacities. It is, therefore, rationality (Prov 15: 14; 1 Kgs 3: 9–10), the principle of ethical options (Prov 6: 18; Mk 7: 21–22), and the root of true religion (Ezek 11: 19).

However, the heart is also the source of the affective and passionate life. It quivers like a tree shaken by the wind (Is 7: 2), becomes soft as wax in fear (Ps 22: 15),

dissolves in water because of terror (Jos 7:5), knows depression and also the exaltation of joy (Prov 15: 13; 17: 22). Falling in love and its intoxication are celebrated by the beloved in the Song of Songs: 'You have ravished my heart, my sister, my bride, you have ravished my heart with a glance of your eyes' (Song 4: 9). The wedding day in Semitic languages is commonly called 'the day of the gladness of heart'. A more prosaic joy is that which is induced by wine (Ps 104: 15), but at the same time degeneration can lurk around, with the blurring of intoxication (Prov 23: 31–33) – as also happens with sexual desire: 'Do not desire her beauty in your heart ... the wife of another' (Prov 6: 25–26). It is however undeniable that 'Hope deferred makes the heart sick, but a desire fulfilled is a tree of life' (Prov 13: 12).

The second emotional organ par excellence is embodied in the bowels, especially maternal, expressed in Hebrew by the well-known root *rhm* which also echoes in the incipit of all suras (except sura 9) of the Quran in the formula called *basmala: bismi Llah al-raḥman al-raḥm*, 'in the name of God, the merciful and the compassionate' (cf. Ventura 2010: 426). The symbol of *raḥamîm*, of the womb, is also applied to God, being used to indicate an almost instinctive and indestructible feeling of love because of which the perfect divine portrait is formulated by Paul as of one who is 'rich in mercy' (Eph 2: 4). The Apostle, however, here uses the abstract *éleos*, but in the New Testament the symbolism of the Hebrew 'visceral' is traced to the verb *splanchnízomai* (12 times: Mt 9: 36; 14: 14; 15: 32; 18: 27; 20: 34; Mk 1: 41; 6: 34; 8: 2; 9: 22; Lk 7: 13; 10: 33; 15: 20) and the noun *splánchnon* (11 times) and the derivates *eusplánchnos* (Eph 4: 32; 1 Pt 3: 8) and *polysplánchnos* (James 5: 11) (Stoebe 1982; Walter 2004).

The emotional aspect of this terminology is expressed brilliantly in the cry of Jeremiah: 'My bowels! My bowels! I writhe in pain. Oh, the agony of my heart! My heart pounds within me' (4: 19, author's translation) or in that of Jerusalem personified: 'Behold, O Lord, for I am in distress, my bowels are stirred in me, my heart is wrung within me' (Lam 1: 20, author's translation). We should also note the constant bond with the other emotional organ, the heart. Through the *raḥamîm* or the verb *splanchnízomai* one can compose the whole spectrum of one of the most delicate emotions: tenderness, which we will consider later.

First and foremost we have the fraternal tenderness which stands out in the aforesaid meeting of Joseph with his brothers, when the emotion affects his bowels (Gen 43: 30). We have the instinctive maternal (Is 49: 15–16) and paternal (Jer 31: 20; Hos 11: 8–9; Lk 15: 20) tenderness which is attributed to God himself. Next, we have human tenderness made up of understanding and sharing, as often happens in the encounter of Jesus with the sick (Mt 20: 34, Mk 1: 41), towards people torn by grief like the widow of Nain (Lk 7: 13) or towards the poor, suffering and hungry crowds (Mt 9: 36; 14: 14; 15: 32, Mk 6: 34), so much so that the Letter to the Hebrews coins the definition of Christ as 'merciful high priest' (2: 17) using however the adjective *eleêmôn*. The love for a hapless neighbour is felt in the bowels, as happens to the Samaritan in the parable (Lk 10: 33), in contrast to the priest and the Levite who pass by, indifferent to the pain of the victim. In short, the Johannine warning is relevant: 'But if any one has the world's riches and sees his brother in need, yet closes his bowels (*splánchna*), against him, how does God's love abide in him?' (1 Jn 3: 17, author's translation). On account of this, it is necessary to be 'merciful (*oiktírmones*), just as your Father is merciful' (Lk 6: 36); and 'blessed are the merciful (*eleêmônes*), for they will receive mercy' (Mt 5: 7).

A third organ which takes on meanings linked to emotionality, after the heart and the bowels, is represented by the kidneys, in Hebrew kelajôt: they are the seat of affections, passions, impulses, and in some ways even of the unconscious (Jer 12: 2, Ps 73: 21, Job 19: 27, Prov 23: 16). God can penetrate into that deepest sphere also. He can illuminate it (Ps 16: 7), he pierces it with his eyes (Jer 20: 12), he probes it (Ps 7: 10), he sifts it with trials (Jer 11: 20; 17: 10) and he refines and purifies it (Ps 26: 2). It was he who, in the gestation of the fetus in the mother's womb, shaped the kidneys (Ps 139: 13). The kidneys are often placed parallel to the heart, whilst at other times they appear through the euphemism of 'loins' (motnaiîm): 'Devastation, desolation and destruction! Hearts faint and knees tremble, all loins quake, all faces grow pale!' (Nah 2: 10). If here the scene is of terror, with the use of the Greek word nephroí, 'kidneys', later it describes instead the indignation that encompasses the father of the Maccabees, Mattathias, when he witnesses the action of a Jew who agrees to offer an idolatrous sacrifice in his village, Modin: 'When Mattathias saw it, he burned with zeal and his kidneys were stirred. He gave vent to righteous anger; he ran and killed him upon the altar' (1 Mac 2: 24). But the kidneys are also capable of getting excited in a surge of joy, as is the case of the father who 'rejoices in his kidneys because the lips [of the son] say what is right' (Prov 23: 16, author's tranlation). In the New Testament the kidneys, nephroí, appear only in Rev 2: 23: 'they will know that I am the one who scrutinizes the kidneys (*nephroús*) and the hearts (kardías) of men' (author's translation).

We conclude this physiological-symbolic analysis with a discussion on two marginal yet evocative organs. First, the nose, the nostrils, af/ap, that in the root of the word (*anf*) onomatopoetically evokes snorting nostrils when a person is overwhelmed by anger. For this reason, figuratively it becomes a specific term to indicate indignation and anger. As L. Alonso Schökel (2013: 67) notes, '*af* is 'the seat of the irascible passion and, therefore, the physical meaning moves on to signify ire, wrath, courage, anger, rage, fury, irritation, indignation, resentment, hatred, envy'. It thus opens up a particularly important chapter that can accommodate within itself a double and antithetical profile, the virtuous view of indignation as moral wrath, as well as the vicious outlook of ire as aggressive anger (see also Sauer 1987).

On the first of these meanings, of 'af as the wrath of ethical indignation, we have the anthropomorphism of the 'wrath of the Lord which is lit against Israel' the sinner (for example in Jdg 3: 8) so much so that the 'day of wrath' becomes a metaphor to describe God's judgment (Ezek 7: 10; Zeph 1: 15, 18; Mt 3: 7, 1 Thess 1: 10, Rom 2: 5; 12: 19). In all languages, and therefore also in the biblical language, 'fiery' images are often adopted in this regard: wrath blazes, burns, flares (in Hebrew the specific *hrh* is used). For good reason, the one who is angry is described as if puffing sparks, his blood is hot and boils, he is inflamed with anger; anger is kindled, creates fire; he is worked up, and so on. God himself is a participant in this psychophysical emotion, on account of which the Psalmist proclaims rhetorically: 'Who considers the power of your anger? Your wrath is as great as the fear that is due to you' (Ps 90: 11). On the same lines, one must consider the genre of imprecatory Psalms which are dripping with emotion (cf. Ps 58 in particular), and in which there is a prevailing atmosphere of appeal to the justice of a moral God, who sides with the victims. The same goes for the literary genre of the prophetic cry of 'Woe!' (See, for example, Is 5: 8–22, Mt 23: 13–33). This, however, does not mean that in the Bible the second aspect of '*af* cannot be denounced: that of cruel and insulting wrath, impetuous and blind fury (Prov 27: 4), of the 'excited dispute that lights the fire and of the violent brawl that leads to shedding of blood' (Sir 28:11, author's translation). Precisely for this reason Paul, in the 'works of the flesh', offers a list of vicious reactions attributable to degenerate ire, including 'enmities, strife, jealousy, dissension, factions, envy' (Gal 5: 20–21). And his final appeal is: 'Do not let the sun go down on your anger' (Eph 4: 26).

There is a one more organ which, in the Bible, can become the seat of emotional reactions: the *liver*. Its identification is sometimes difficult because the rare term *kabed* (14 times in the Old Testament, cf. for example Ex 29: 13, 22; Lev 3: 4; 4: 9; 9: 10, 19; Prov 7: 23) has the same root as a much more common and noble term *kabôd*, 'glory', esspecially divine glory. Thus, 'there are a number of cases of the use of *kabôd*, glory, which could be later adaptations, spiritualizing an original *kabed*, liver' (Schökel 2013: 376; Sauer 1987). The fact is that – in addition to indicating the material organ in the human body and in animals sacrificed in worship and as subject of magic hepatoscopy to plot fortunes (Ezek 21: 26) – the liver is sometimes regarded as the seat of strong emotions. We thus have the lament that rises from the spectator of the ruins of Jerusalem under the armies of Nebuchadnezzar, including this cry: 'My eyes are spent with weeping; my bowels are in turmoil; my liver (*kabed*) is poured out in grief' (Lam 2: 11, author's translation). It is basically the bile that embodies the emanation of a *summus animi dolor* (Zorell 1968: 344).

The function that is assigned to the liver to express the peace and serenity of the person praying in Psalm 16: 9 is more positive. Here mention is made of the heart (*leb*) and the entire corporeality (*basar*) as well as the liver (*kebedî*), although the Masoretes – as noted above – confused this with the more common kabôd, 'glory', while earlier (16: 7) the kidneys (*kiljôt*) are introduced: 'Therefore my heart rejoices and my liver exults, my flesh also dwells safe' (16: 9, author's translation). Thus we have in this Psalm a list of all the organic metaphors regarded in the Bible as sources of emotions, affections and passions (cf. Dhorme 1923).

The Anguish of Jesus

At this point, we should subject some fundamental emotional 'families' to a more careful analysis, taking into account the fluidity that these categories entail, which means that they are capable of spilling over into other human experiences. The repeated assertion of the unity of biblical anthropological symbolism makes it difficult to resolve in a clear way the different boundaries of these emotions. If we take into consideration the vast bibliography with a psychological, sociological, and even medical and scientific slant, we could isolate four families of very mixed emotional range (Bodei 1997; Chimirri 1996; De Simone 2013; Natoli 1996; Barbaglio and Bof 2002).

- 1. Fear: anguish, anxiety, dread, nervousness, apprehension, tension, hesitation, scare, terror, and so on, up to the extent of pathology of phobias or panic.
- 2. Wrath: ire, wrath, fury, anger, irritation, exasperation, acrimony, animosity, annoyance, irritability, hostility, hatred up to the extent of pathological violence.
- 3. Sadness: pain, sorrow, melancholy, loneliness, isolation, bitterness, desolation, killing up to the extent of depressive disorders.
- 4. Joy: enjoyment, happiness, bliss, tenderness, affection, pleasure, ecstasy, elation, satisfaction, elation up to the extent of forms of maniacal and fanatic enthusiasm.

We will now choose from this rainbow of diverse emotional colors just two extreme models. Using an image already coined in the introduction, on the one hand we will present the frosty 'violet' of anguish, with all the nuances that it implies (distress, anxiety, restlessness, apprehension, distress, torment, pain, weeping ...), and on the other hand we will choose the warm 'red' of affection that manifests itself in intimacy, with the tenderness and the tinge of reciprocal belongingness.

Given the limitations of our analysis, we will take up only some points, and these will remain open to further investigation. Let us start, then, by considering the field of action of anguish, which has been accurately and evocatively described by Kierkegaard in *The Concept of Anxiety* (Kierkegaard 1981), in which the experience of strong emotions is seen as a launching pad towards transcendence.

From the lexical point of view, anguish is formulated in the main European languages through the symbol of restriction, almost as in a prison, as suggested by the root which generates '*angustia, angoscia, angoisse, Angst, anguish ...*' and which introduces the medical term *l'angina pectoris*, in which the emotion of anguish can generate a physiological effect. The same phenomenon can be noted in Hebrew, where the root *srr*, which defines a restricted and constrained space (Is 28: 20; 49: 19), generates the anguish of the afflicted, restless and unhappy soul, *sar* (Gen 32: 8; Judg 2: 15; 2 Sam 1: 26; Ps 66: 14; 102: 3; 106: 44; 107: 6). For this reason liberation is expressed through the root *rhb*, which denotes a spatially open, vast and free horizon (Deut 12: 20; Ex 3: 8; 34: 24; Ps 119: 45) and which can therefore become a symbol of existential consolation and salvation: 'Enlarge my anguished heart, deliver me from anxieties' (Ps 25: 17, author's translation; cf. 119: 32; 18: 37; Is 60: 5).

If the book of Job can be taken as exemplifying multiple instances of anguish (as can in a more reduced way the lamentations of the Psalter), then the basis of the doctrine of Incarnation itself is the anxiety that grips Jesus. This can be seen especially in his passion as we read in the famous declaration of the Letter to the Hebrews: 'In the days of his flesh, Jesus offered up prayers and supplications, with loud cries and tears, to the one who was able to save him from death, and he was heard because of his reverent submission. Although he was a Son, he learned obedience through what he suffered; and having been made perfect, he became the source of eternal salvation for all who obey him' (Heb 5: 7–9. For the exegesis of this passage, see Bachmann 1987; Swetnam 2000; Casale 2005: 247–262). Setting aside the exegetical and theological issues related to this passage (especially with regard to the 'perfection' achieved through 'obedience'), there is no doubt that Christ is in solidarity with humanity through his suffering: it is precisely in this painful way that he implements and reveals the fullness of his humanity. An experience thus becomes a dramatic instrument of formation: the Greek verbal pair *épathenlémathen* ('suffered/learned') is interesting in wake of the famous binomial *pathématalmathémata* ('sufferings/teachings'), a *topos* of Greek literature, beginning with Aesop (Tosi 1991: 753–753; Woschitz 1983).

Christ is, therefore, 'the man who knows suffering' like the Servant of the Lord (Is 53:3), and his existence is marked by weeping – both for the death of his friend Lazarus, with an internal emotion that pervades the soul (Jn 11: 32–38), and for the fate of the beloved city of Jerusalem (Lk 19: 41). He is distraught in the face of his betraval by Judas (Jn 13: 21), he sighs in the face of disease (Mk 7: 34) and hostility against him (Mk 8: 12), he experiences indignation and sadness at the same time when confronted by the hardness of the hearts of his audience (Mk 3: 5). But the pinnacle of his emotional anguish is arrived at in Gethsemane (cf. Fabris 2003; Barbaglio 2000), the psychological dynamics of which are anticipated by John in the encounter of Christ with the Hellenists: 'Now my soul is troubled. And what should I say - 'Father, save me from this hour'? No, it is for this reason that I have come to this hour' (Jn 12: 27). Against the background of Jesus's anguish in the Garden of Gethsemane there is a coming-together of Judas' betraval, Peter's denial, and the indifference and neglect of the disciples, components that result in an emotional state of Jesus which climaxes in the sweating of blood (Lk 22: 44), which Luke considers to be the outcome of an agôn, of an inner struggle-agony.

The evangelist most attentive to the reactions of Christ on that night is Mark, who has already indicated other intimate occasions of tension during Jesus's public ministry (cf. Mk 3: 5; 8: 12; 10: 14). At the entrance to Gethsemane, where Jesus isolates himself along with the sleepy Peter, James and John, Mark notes that 'he began to *ekthambeîsthai* e *ademoneîn*' (14: 33). The first is a verb of terrified fear, and is used only by this evangelist in the New Testament (cf. Mk 9: 15; 16: 5, 6). It is bewilderment in front of an unpredictable experience that upsets the soul; indeed, in classical Greek it is a word used to describe the terror and trembling of the agonized. The second verb, *ademoneîn*, is also rare in the lexicon of the New Testament (it is only used in the parallel text of Mt 26: 37, and in Phil 2: 26): it means anguish, distress, anxiety.

This is an inner state which is confessed to by Jesus himself: 'I am deeply grieved (*perilypós*), even to death' (Mk 14: 34; cf. Mt 26: 37). This is inspired by the words of the antiphon in Psalms 42–43, to which we have already alluded (42: 7, 12; 43: 5). The emotional state that radiates from the prayer of Jesus is expressed by Mark, first, in an indirect way in his narrative: '[he] prayed that, if it were possible, the hour might pass from him' (14: 35). It is then expressed in an explicit and personal form: 'Abba, Father, for you all things are possible; remove this cup from me: yet,

not what I want, but what you want' (14: 36). It is interesting to note in this invocation the dialectics between the anxiety that leads to bitter sadness and the willingness that dominates emotion, leading to the decision to follow the *Via Dolorosa* which leads to the summit of Calvary. Emotion, feeling, and passion intersect with freedom, rational choice, and voluntary decision, just as the extreme desolation of supplication clings to the intimacy of the divine fatherhood ('Abba, Father'). This is what will also happen in the final invocation on the cross where, as is well known, the opening words of the tragic Psalm 22 pronounced by Jesus do not finish up in despair, because the text of the Psalm ends up with a bright foretelling of liberation and joy – and Christ, according to the Jewish practice, assumes the Psalm in totality, waiting also for a final saving answer to his impassioned imploring.

The image of the chalice – which is not infrequently a symbol of divine wrath and judgment, and therefore of death (Ps 75: 9; Is 51: 17; Lam 4: 21; Hab 2: 16) – embodies an ominous mortal destiny. It generates extreme sadness, such as that confessed by Jesus to the disciples, when he spoke of a sadness *heós thanátou*, 'unto death'. It is the same situation as that of many biblical characters who, in the face of desperate or unbearable situations, invoke death: from Moses (Num 11: 15), Elijah (1 Kgs 19: 4), Jeremiah (20: 14–18), Jonah (Jon 4: 3, 8) and Job (Job 3: 3) to Tobias and Sarah (Tob 3: 6, 13). Jesus, however,

does not ask to be freed from anxiety *through death*, but to be freed *from death*. In his mouth the expression 'sorrowful even unto death' is a kind of a superlative to indicate the extreme form of a state of mind from which he would like to be relieved ... But Jesus chooses to remain faithful as a son despite the prospect of that death ... He therefore faces death with the confidence and the freedom of the son who even in death knows he can count on his vital relationship with the Father (Fabris 2003: 58–59).

(For a full analysis of the scene in Gethsemane, see Brown 1999: 137–362.)

The Jealous Tenderness of God

If we go along with the theory of the structures of the imaginary which has been developed by Gilbert Durand (1993, 1982), which he modeled on the somatic typology of the human person, in addition to the dominant vertical 'positional' ascendant and the cyclical 'copulative' of progress and of return, a dominant 'digestive' is delineated, which assumes a huddling together in intimacy. It is in this context that the most tender and possessive emotions of communion develop. We come now to the other extreme of our spectrum of emotional colours, where the warmth of love dominates. We have already introduced this particular aspect when we looked at the body of the maternal and paternal 'bowels' (*rahamîm*), with their sway of intimate and sweet, or compassionate and merciful feelings.

Now we wish to refer to a more general emotion which undergirds the realm of genuine love and tenderness, expressed in the aforementioned 'visceral' root *rhm* with a very evocative symbolism. The German writer Heinrich Böll, winner of the Nobel prize in 1972, proposed a theology that could acquire tenderness and could

use its language in order to knock out its great opponent: mere ecclesiastical legislation. Since then steps have been taken towards the development of a 'theology of tenderness' by Carlo Rocchetta (Rocchetta 2000; cf. Fuchs 1988; Vanier 1995), with recourse to the category of 'compassion'. Similarly, Johann Baptist Metz worked to enhance Christian empathy in religious and cultural pluralism (Metz et al. 2009), and the theme of 'mercy' has been emphasized by Walter Kasper (2013) and (especially) by the Magisterium of Pope Francis (cf. Moreira 1996; Da Silva 2010; Sobrino 1992).

The foundation of this development is the image of the father. 'As a father has compassion (rhm) for his cildren, so the Lord has compassion (rhm) for those who fear him' (Ps 103: 13; cf. Hos 11: 1–4). Or the maternal: '[You] have been borne by me from your birth, carried from the womb (rahem)' (Is 46: 3; cf. 49: 15; 66: 13). The relationship of intimacy with the Lord is the same as that of 'a weaned child with its mother' (Ps 131: 2). At other times, to express this tender and sweet intimacy, recourse is taken to zoomorphism: to the bird who 'will cover you with his pinions,' so that 'under his wings you will find refuge' (Ps 91: 4); or to the 'hen [who] gathers her brood under her wings' (Mt 23: 37; Lk 13: 34). Also evoked are 'birds hovering' above the nest to defend it: 'so the Lord of hosts will protect Jerusalem' (Is 31: 5). Or again, 'As an eagle stirs up its nest, and hovers over its young; as it spreads its wings, takes them up, and bears them aloft on its pinions, the Lord alone guided [Israel]' (Deut 32: 11).

One could attach a long list of ways in which, with varying vocabulary and with different symbols, the feeling of tenderness on the part of God toward his people is highlighted, as it is also highlighted with respect to fraternal (cf. Ps 133), amicable (cf. 2 Sam 1: 19–27), and nuptial bonds. In the latter case, the Song of Songs paradigmatically exalts the embrace of the two main characters, who live the full range of emotions that two lovers experience in their profound intimacy, in an emotional dynamism that is never satisfied. For this reason, the ending is once again an appeal to amorous pursuit: 'Make haste, my beloved, and be like a gazelle or a young stag upon the mountains of spices!' (Song 8: 14). Hosea's telling of his nuptial story, whose deep crisis could be cured by a return to an exclusive embrace in solitude, is similar: 'I will now allure her, and bring her into the wilderness, and speak tenderly to her' (Hos 2: 14).

A particular characteristic of passionate tenderness can also be jealousy, the ardour of which is well expressed by the same root that is the basis of the Hebrew word *qin'ah*: *qnn* in fact denotes a reddish dye, and hence the blush that pervades those who experience passion. The Greek term $z \hat{e} los$ (which occurs 16 times in the New Testament, and 11 times as the verb $z e lo \hat{u} n$) also presupposes ardour, fervour and ardent desire – hence its use to designate the revolutionary movement of the Zealots, mentioned eight times in the New Testament. This is why jealousy often accompanies the symbol of fire, as in the famous passage from the Song of Songs: 'Tenacious as *she'ol* is jealousy, Its flashes are flashes of fire, a divine flame!' (8:6, author's translation; cf. Deut 4: 23–24; 6: 14–15; 32: 21–22; Zech 8: 2; Heb 10: 27). With reason, therefore, in some languages falling in love is called 'the strike of a thunderbolt'.

Jealousy appears to be antithetical to tenderness, being a desire for the exclusive possession of the other. On the one hand, it expresses the negativity of a blinding passion (Prov 27: 4; Job 5: 2), capable of leading to homicidal violence, as in the case of Cain (Gen 4: 5–6); on the other hand, it can express the unbreakable bond that binds two people, a bond wounded by betrayal. In this light, the extensive use of jealousy in the Bible as a theological category opposed to idolatry is explained, to such an extent as to make it the mantle of God (Is 59: 17); see for example, Ps 78: 57–58; Ez 5: 13; 1 Cor 10: 21–22. Idolatry provokes this divine jealousy to the extent that the lexeme 'idol of idolatry' (Ez 8: 3) is coined.

Precisely because of its connection to nuptial symbolism, jealousy reveals itself as another face of tenderness, the strong and passionate emotion that God feels for his creature and, as happens in many divine biblical definitions, this jealousy is not only a reactions to rejection but also a source of infinite love. For this reason divine jealousy is described through the symbolic numerical contrast between the four generations through which the wrath of God lasts, and the thousand ones of his tender goodness (Ex 20: 5; 34: 6–7). The same divine tenderness appears in the protective quality that jealousy assumes towards Israel, when the jealous zeal of the Lord breaks out against Israel's oppressors, creating a sort of defensive wall for the victims (Nah 1: 2; Zech 1: 14–17; Wis 5: 17). God, who is named 'Jealous' *par excellence* at Sinai (Ex 34: 14), will be the guardian of the faithful 'remnant' of Israel, upon whom he will pour out his effective and saving tenderness (Is 37: 31–32). And the faithful will be defined precisely through their zealous 'jealousy' towards their God, as stated by Elijah (1 Kgs 19: 10), by Jesus himself (Jn 2: 16–17) and by the apostle Paul (2 Cor 7: 7, 12; 11: 2).

Four Analytical Moments

This short essay dedicated to an embryonic theology of emotions is governed by a conviction which, incidentally, also reigns supreme in the field of psychology, science and culture in general: the category 'emotional' is by its nature highly mobile and fluid, so as not to be condensable in a definition and, therefore, also not compressible into a rigorous analysis. The fact nevertheless remains that the Bible is traversed by multiple emotional threads that confirm not only the incarnation of the Word of God but also the symbolic and analogical quality of theology (in the sense of discourse about God) offered by the Scriptures. This is what we pointed out at the beginning of our analysis when we outlined, first, a panoramic gaze over the sacred texts.

We then attempted, second, a reduction of our perspective, trying to find a small 'grammar' of emotional feeling that is based on biblical anthropology and so on a unified theory of knowledge. This does not seek to separate emotional knowing from intellectual knowing, intertwining them despite the diversity of approaches. Thus comes the importance that is assigned to emotionality or, if you wish, to the reasons of the heart. At this point we identified a specific emotional boundary which

is connected to and yet distinct from passion, this latter to be considered as a permanent *habitus* generated and nourished by emotions. The engine of the emotional experience in its fullness is to be found in *desire* with its two faces, one bright and positive and the other dark and negative. Of course, in this simplified emotional 'grammar', we could have taken in more ways of articulating emotion, as happens in many psychological manuals: subjective experiences or feelings, expressive behaviors produced by emotions, bodily changes generated by emotion, and so on. The theological discourse, however, could be lost in a more general treatise on feelings.

The third movement of our journey has focused on certain 'organs', producers of emotion, employed in their symbolic and emotional contexts: the heart, bowels, kidneys, nose and liver. Thus we confirmed the basic psycho-somatic unity of biblical anthropology. In the fourth step, we have sought to select, symbolically, a typology of emotion. Here, we opted for the two extremes of anguish and tenderness, the first a cold and lacerating experience, the second a warm and ardent one. In some respects, they are accompanied by two basic inventories of prayer, which are not limited only to the biblical arena: on the one hand, supplication and lamentation; and on the other hand, hymns and thanksgiving – that is, the painful entreaty contrasted with joyful praise. In another sense, we could conclude that emotions reflect the contradictions of historical experience and of the yearning towards eschatological fullness in which 'Death will be no more; mourning and crying and pain will be no more' (Rev 21: 4), because there will be 'divine intimacy' in all its glorious and luminous fullness: 'He will dwell with them as their God; they will be his peoples, and God himself will be with them' (Rev 21: 3), because 'God will be all in all' (1 Cor 15: 28).

Bibliography¹

Bachmann, M. (1987). Hohepriesterliches Leiden. Beobachtungen zu Hebr 5,1-10. ZNW, 78, 244–266.

Barbaglio, G. (2000). 'Le emozioni e i sentimenti di Gesù'. In Servitium 34, n. 130, pp. 39-50.

Barbaglio, G., & Bof, G. (2002). Sentimento. In G. Barbaglio, G. Bof, & S. Dianich (Eds.), *Teologia* (pp. 1504–1522). San Paolo: Cinisello Balsamo.

Barbiero, G. (2013). Tu mi hai sedotto, Signore. Roma: Gregorian & Biblical Press.

Bodei, R. (1997). Geometria delle passioni. Paura, speranza, felicità: filosofia e uso politico. Milano: Feltrinelli.

Bordoni, M. (1982). Teologia pathetica dei profeti. In *Gesù di Nazaret Signore e Cristo* (Vol. I, pp. 142–144). Rome: Herder – Pontificia Università Lateranense.

Brown, R. E. (1999). La morte del Messia. Brescia: Queriniana.

Büchsel, F. (1968). thymós, epithymía.... In Grande Lessico del Nuovo Testamento (Vol. III, coll. 589–604). Brescia: Paideia.

Casale, C. (2005). Marcheselli. In Lettera agli Ebrei. Milano: Paoline.

Chimirri, G. (1996). Etica delle passioni. Bologna: Dehoniane.

¹Unless otherwise stated, Biblical references are to the New Revised Standard Version.

- Da Silva, R. R. (2010). Misericordia. In R. Penna, G. Perego, & G. Ravasi (Eds.), *Temi teologici della Bibbia* (pp. 857–863). San Paolo: Cinisello Balsamo.
- De Simone, G. (2013). Sentire l'uomo, gustare Dio. Assisi: Cittadella.
- Dhorme, E. (1923). L'emploi métaphorique des noms de parties du corps en hébreu et en akkadien. Paris: Gabalda.
- Durand, G. (1982). Les structures anthropologiques de l'imaginaire. Introduction à l'archétypologie générale. Paris: Bordas.
- Durand, G. (1993). L'imagination symbolique. Paris: Presses Universitaires de France.
- Fabris, R. (2003). L'angoscia di Gesù. In Servitium 37, n. 145, pp. 53-62.
- Fuchs, E. (1988). Desiderio e tenerezza. Torina: Claudiana.
- Gerstenberger, E. (1987). hmd. In E. Jenni & C. Westermann (Eds.), Dizionario Teologico dell'Antico Testamento (Vol. I, coll. 501–503). Torino: Marietti.
- Hübner, H. (2004). epithymía..., In H. Balz & G. Schneider (Eds.), Dizionario Esegetico del Nuovo Testamento (coll. 1309–1314). Brescia: Paideia.
- Kasper, W. (2013). Misericordia. In Giornale di teologia (n. 361). Brescia: Queriniana.
- Kierkegaard, S. (1981). *The Concept of Anxiety* (trans: Thomte, R.). Princeton, NJ: Princeton University Press.
- Kleinginna, P. R., Jr., & Kleinginna, A. M. (1981). A categorized list of emotion definitions, with suggestions for a consensual definition. *Motivation and Emotion*, 5, 345–379.
- Lacan, J. (1974). La direzione della cura e i principi del suo potere. In *Scritti* (Vol. II, p. 624). Torino: Einaudi.
- Metz, J. B., Kuld, L., & Weisbrod, A. (Eds.). (2009). *Compassion. Weltprogramm des Christentums*. Freiburg: Herder.
- Moreira, G. L. (1996). *Compaixão-Misericordia: uma espiritualidade que humaniza*. São Paulo: Paulinas.
- Natoli, S. (1996). Dizionario dei vizi e delle virtù. Milano: Feltrinelli.
- Origen. In Genesim Homiliae IX. Migne, Patrilogia Graeca 12.
- Ravasi, G., & Tagliapietra, A. (2010). Non desiderare la donna e la roba d'altri (pp. 9–69). Bologna: Il Mulino.
- Rocchetta, C. (2000). Teologia della tenerezza. Bologna: Dehoniane.
- Sauer, G. (1987). 'af, ira. In E. Jenni & C. Westermann (Eds.), Dizionario Teologico dell'Antico Testamento (Vol. I, pp. 195–196). Torino: Marietti.
- Schmithals, W. (2004). ginosko, gnosis, gnostos. In H. Balz & G. Schneider (Eds.), Dizionario Esegetico del Nuovo Testamento (coll. 654–663). Brescia: Paideia.
- Schökel, L. A. (2013). Dizionario di ebraico biblico. San Paolo: Cinisello Balsamo.
- Schottroff, W. (1978). jd' conoscere. In E. Jenni & C. Westermann (Eds.), Dizionario Teologico dell'Antico Testamento (Vol. I, coll. 591–607). Torino: Marietti.
- Sobrino, J. (1992). El principio-Misericordia. Bilbao: Sal Terrae.
- Stoebe, H. J. (1982). rhm pi. avere misericordia. In E. Jenni & C. Westermann (Eds.), Dizionario Teologico dell'Antico Testamento (Vol. II, coll. 685–692). Casale Monferrato: Marietti.
- Strola, G. (1999). Alcuni elementi di lessicografia per lo studio del desiderio di Dio nella Bibbia ebraica. *Rivista Biblica*, 47, 361–371.
- Strola, G. (2000). Alcuni elementi di lessicografia per lo studio del desiderio di Dio nella Bibbia ebraica. *Rivista Biblica*, 48, 307–317.
- Strola, G. (2003). Il desiderio di Dio. Studio dei Salmi 42-43. Assisi: Cittadella.
- Strola, G. (2010). Desiderio. In R. Penna, G. Perego, & G. Ravasi (Eds.), *Temi teologici della Bibbia* (pp. 326–333). San Paolo: Cinisello Balsamo.
- Swetnam, J. (2000). The Crux at Hebrews 5,7-8. Bib, 81, 347-361.
- Tosi, R. (1991). Dizionario delle sentenze latine e greche. Milano: Bur-Rizzoli.
- Vanier, J. (1995). Lettera della tenerezza di Dio. Bologna: Dehoniane.
- Ventura, A. (Ed.). (2010). Il Corano. Milano: Mondadori.
- Walter, N. (2004). splanchnízomai splánchnon. In H. Balz & G. Schneider (Eds.), Dizionario Esegetico del Nuovo Testamento (coll. 1389–1393). Brescia: Paideia.

- Woschitz, K. M. (1983). Erlösende Tränen. Gedanken zu Hebr 5,7. In *Bibel und Liturgie* (Vol. 56, pp. 196–201).
- Zorell, F. (1968). Lexicon Hebraicum et Aramaicum Veteris Testamenti. Roma: Pontificium Institutum Biblicum.

Cardinal Gianfranco Ravasi is Cardinal-Deacon of San Giorgio in Velabro. He is also President of the Pontifical Council for Culture, President of the Pontifical Commission for Sacred Archaeology and President of the Coordination Council of the Pontifical Academies.
Chapter 13 Is the Ear More Spiritual Than the Eye? Theological Reflection on the Human Senses

Ernst M. Conradie

Abstract There has been a long-standing tendency in Protestant theology to privilege the role of the cognitive over the conative and emotive dimensions of personhood. The assumption of this privileging of the cognitive is related to the distinct roles attributed to the human senses. In response, a dual hierarchy of the senses is suggested in which the sense of touch is the most basic and perhaps the most important, while the eye and (especially) the ear allow for more discernment. This thesis is tested and developed in conversation with Tim Ingold's views on the relatedness of the eye and the ear. Some theological, and more specifically pneumatological, reflections are offered in order to allow for the full range of the human senses and to do justice to the theological significance of human emotions.

Keywords Emotions • Tim Ingold • Forgiveness • Human senses

Introduction

There has been a long-standing tendency in Protestant theology to privilege the cognitive over the conative and emotive dimensions of personhood. Accordingly, faith is understood as a form of knowledge or assent, more specifically the knowledge of God, that can be expressed as propositional truth claims. If it is thinking that defines a distinctively human capability, this is epitomised by God's creative genius. However, Calvin, following Scotus, shifted the attention to God's will, more than God's power or God's intellect, in understanding what happens in history. What, then, about the way in which information is filtered by relevance patters governed by basic emotional responses? Should emotion not be of primary significance in any Christian reflection on God's characteristics? What about God's love, anger, compassion, patience and loyalty?

E.M. Conradie (🖂)

Department of Religion and Theology, University of the Western Cape, Cape Town, South Africa e-mail: econradie@uwc.ac.za

© Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_13

The assumption of this essay is that the privileging of the cognitive is related to the distinct roles attributed to the human senses, and to the priority attributed to hearing. The deepest theological intuition here is related to a forensic notion of justification. Forgiveness in Jesus Christ is not something than can be seen or touched. It has no experiential basis, but is offered to perpetrators despite all the evidence pointing to their complicity. It is not based on remorse or good intentions and does not follow upon a change of heart, attitude or behaviour. It comes to sinners in the form of an alien and unmerited word of forgiveness, a verdict than can only be heard and accepted upon God's authority. Therefore, the ear is seen to be more spiritual than the eye. Faith entails a trust in what cannot be seen. What matters is the content of faith (*fides quae creditur*) more than the experience of faith (*fides qua creditur*). In a poignant form: Whether I believe I do not know, but I know the One in whom I believe. The verdict is not dependent on our fluctuating emotions or on the inclinations of a capricious judge (whose good will has to be secured by bribes) but on grace alone, confirmed by word and sacrament.

Yet, one may argue that forgiveness can also be expressed in the form of an embrace (Volf 1996), thus involving the intimacy of touch (the tactile senses), more than hearing (which assumes a degree of distance). At the same time an embrace may be deceptive and open to political abuse – so that the clarification of words may be required to establish the veracity of the forgiveness that is offered. On the other hand, words may become cheap without accompanying deeds that would build trust. Either way, whether through embrace or through words, experiencing forgiveness offers a prime example of distinctly human emotions. Dogs may show emotions such as guilt and perhaps remorse, but whether they can interpret being provided food as a sign of forgiveness is debatable and probably not open to scientific inquiry.

Following these preliminary observations I will offer constructive theological reflection on the human senses, drawing from a larger project on seeing the mystery of the world in terms of the whole household of God and seeing the history of the universe in terms of God's acts of household (economy) – in which I argue that faith may indeed be regarded as a form of seeing (Conradie 2015). I will first suggest a hierarchy of the senses in terms of two axes, namely the intimacy or distance between the one who senses and that which is sensed and levels of discernment. In each case I will comment on the significance of these senses for shaping human emotions. I will then reflect on the relationship between the senses and comment on the substantive theological issues involved in this regard.

A Hierarchy of the Senses?

With the sense of touch (or tactile perception) distance is minimised, so that any experience of touch is also one of being in touch. The somatosensory system is a complex sensory system made up of a number of different receptors (including proprioception, haptic perception, a sense of temperature and of pain) that are processed in the parietal lobe of the cerebral cortex. There is a mutuality implied in haptic perception (the process of recognizing objects through touch) that does not necessarily apply to the other senses. The significance of touch is exemplified by a mother nursing an infant, a warm embrace in times of bereavement, the intimacy of sexual play and experiences of bodily pain caused by external objects. In each case primordial emotions and survival mechanisms are at stake. In each case such emotions may well override a conative ability as well as the clarity of cognitive processes. It seems that basic survival instincts are prompted in a more rudimentary way by touch than by the other senses.

One may argue that tasting is a specialised form of touching. Taste may be regarded as even more immediate than touch, since that which is tasted is internalised if also swallowed. Tasting is, however, far more differentiated than the rather amorphous sense of touch, even if room is allowed for fine touch instead of crude touch. This is exemplified by the art of cooking and even more so by wine tasting. Wine masters may identify the variety, the location and even the vintage with incredible accuracy. The warm emotions associated with food and wine shape identity, family ties, tribal bonds and collegiality alike. The same applies to the immediate aversion sensed when tasting figs that have gone sour or sucking petrol from a transfer pipe when your tank is empty. All the human senses prompt desire but it seems that a special significance is attached to the desire to taste (also evident in the vices of gluttony and drunkenness). Such desire implies cognitive discernment, conative attraction and especially emotional attachment or detachment.

Smell or scent, one may observe, is somewhat less immediate than taste and can be experienced at some distance from the source of the odour. Since our taste buds can actually distinguish only five tastes (sweetness, acidity, saltiness, bitterness and umani, or savoury tastes) one may argue that we smell food and wine more than we taste it. As indicated in the case of perfume there is arguably more discernment involved in smelling than in tasting. There are millions of olfactory receptor neurons that send sensory signals to the brain. Although this sense is less developed in humans than in some other animals there can be no doubt about the emotional significance of smelling. Olfactory information is processed and projected through a pathway to the central nervous system, which controls emotions and behaviour as well as basic thought processes. Examples of the emotional impact of smelling include fragrances related to sexual attraction, the inviting aroma of a good soup, the aversion to the body odour of others (a breeding ground for racism) and foul stenches related to a lack of sanitation (in South Africa issues around service delivery has prompted what is called poo protesting).

Visual perception occupies an iconic position in modernity. This is epitomised by the demand for empirical observation, the critique of authority (seeing is believing), the cultural influence of the visual media (television) and the stimulus of advertisements. Compared to other species, seeing is the best developed of the human senses although we are certainly not at the top of the visual hierarchy. It should be obvious that seeing requires some degree of distance, that it allows for high degrees of differentiation and that it is to some extent possible to detach seeing from emotional attachment. Consider the scientific demand for 'objectivity', but also keeping a 'poker face' and a Stoic demonstration of courage in the midst of danger. The distance involved in seeing is deceptive as this has to be mediated by light as is registered on the retina. Yet such light may come from a distant star, so that more distance is possible with seeing than with any of the other senses. The processing of visual stimuli is subject to much controversy: what is actually seen is open to interpretation (and illusion), and in the case of humans, it may therefore be influenced by language.

The differentiation that seeing facilitates is impossible without the role of naming and thus of words, language and hearing. At best these are combined through the role of symbols. An image may be rich in connotations but such connotations can only be discerned if one's eyes are guided by one's ears in a particular direction. This suggests a dialectic between image (seeing) and word (hearing), in which the image is not merely a visible word (as the sacraments have been portrayed since Augustine) but has a certain priority. Yet, compared to the image, the word allows for far more differentiation. One may detect thousands of colours and shades, and distinguish between millions of objects, but it is debatable whether one can really see them without the discernment and classification that naming allows. In walking through Cape fynbos I may be in the mood to let a thousand flowers bloom but would not know which of the species are close to extinction without some botanical knowledge. Indeed, hearing is 'higher' than seeing if plotted on a hierarchy of discernment. This is not so much related to the auditory senses, or to the processing of sounds in the temporal lobes of the brain, but to human language. Whether this implies that the ear is more 'spiritual' than the eye will require further scrutiny.

The Relationship Between the Senses

The discussion above may create the impression that the human senses can not only be distinguished but can be treated as discrete entities. This is evidently not the case. All the senses involve cognition and discernment, all of them prompt human movements and decision-making, and all combine to shape human emotions: the intimate touch, the inviting aroma, the delicate perfume, the attractive face, the consoling word. Moreover, the cognitive, the conative and the affective cannot be clinically separated – as numerous studies in the cognitive sciences, including psychology, amply demonstrate.

In what follows below, drawing on Tim Ingold's work, I will explore the interplay between touching and seeing and between seeing and hearing in more depth before commenting on the theological significance of these categories.

Tim Ingold describes, and also challenges, the Western privileging of sight over the other senses as a source of objective knowledge. He says:

In the terms of this dichotomy, vision is distancing, objectifying, analytic and atomising; hearing is unifying, subjective, synthetic and holistic. Vision represents an external world of being; hearing participates in the inwardness of the world's becoming: the former is inherently static, the latter suspended in movement. Whereas one hears sound, one does not

see light, but only the things off whose surfaces light is reflected. This is why hearing is supposed to penetrate the inner subjective domain of thought and feeling in a way that vision cannot (Ingold 2000: 155).

Accordingly, hearing binds people together in community, while seeing isolates the individual from the world. With the ascendency of vision in the West, religion gave way to science (Ingold 2000: 248). He adds that for people in non-Western societies seeing and hearing are not radically opposed, since seeing is also caught in the flow of time and movement. He speaks of the 'hearing eye' and the 'seeing ear'. Both senses are embedded in participatory experience where sounds do not come from afar, nor are objects seen at a distance. Ingold (2011: 129) adds that we do not see the sky. It is not so much that we see the sky but that we see something in the sky. Likewise, seeing requires light; we see something in the light. The sky is not illuminated; it is luminosity itself. Vision is not merely spatial, nor is hearing only temporal. It is only from within such participatory knowledge that observation may emerge. Ingold's formulation is eloquent:

Rather than thinking of ourselves only as observers, picking our way around the objects lying about on the ground of a ready-formed world, we must imagine ourselves in the first place as participants, each immersed within the whole of our being in the currents of a world-in-formation: in the sunlight we see in, the rain we hear in and the wind we feel in. Participation is not opposed to observation but is a condition for it, just as light is a condition for seeing things, sound for hearing them and feeling for touching them (2011: 129).

Ingold argues that perception is about movement. Seeing is not the achievement of a mind in a body, but of the whole organism as it moves about in its environment; and what it perceives are not things as such, but paths that may intersect with the organism's own movement (Ingold 2011: 11). Indeed, movement is knowing (Ingold 2011: 161). I would add that vision itself is not a snapshot but a movie, a motion picture. What needs to be seen is the connection between a series of frames. The selected frames never provide a full picture, but only offer some disparate pointers. There are many 'gaps' that have to be filled (Wolfgang Iser) in order to make sense of the selected frames. This requires discernment, seeing what is invisible. Here the direction of the eye needs to be guided by the ear. It comes as no surprise therefore that such discernment has a narrative structure too. As Ingold (2011: 161) insists, 'to know someone or something is to know their story and to be able to join that story to one's own.' Storied knowledge is expressed by telling (literally relating) the story by 'the retracing of a path through the terrain of lived experience' (2011: 161). To tell a story is not to represent the world but to trace a path through the world that others can follow (2011: 162). In narrative the distinction between inner and outer, between self and world, is blurred so that the storyteller and the listeners participate in what is narrated. It is in the art of story-telling that the key to human knowledge resides.

Ingold radicalises the emphasis on sensory experience as being embodied so that people are rooted, anchored to a particular place. He emphasises the role of the atmosphere where light, sound and feeling 'tear at our moorings'. He adds: 'far from being enfolded into the body – as the concept of embodiment would imply – they – take possession of it, sweeping the body up into their own currents. Thus, as it is immersed in the fluxes of the medium, the body is enlightened, ensounded and

enraptured' (Ingold 2011: 135). This suggests an interplay between the haptic and the optical. Ingold argues that haptic engagement is close range and hands-on, whilst an optic relation between mind and world is supposedly founded on distance and detachment. Landscape as cartographic and optical projection is thus tainted by an objectifying bias (see Ingold 2011: 133). However, if seeing requires luminosity, then seeing is necessarily a way of being embedded in the landscape or (better) in landshaping, especially if multiple levels of seeing are acknowledged.

The dialectic between seeing and hearing allows for multiple levels of seeing, namely seeing and appreciating forms at the surface level (albeit that surfaces may be wrinkled and folded, so that it is by no means self-evident what it is that is seen), perceiving (seeing an object as something else by filling in some missing details), phenomenological reflection (noticing what is too obvious to be seen or foregrounded), metaphoric re-description (a creative form of 'seeing as' - see Ricoeur 1978), seeing connections between events (as in seeing a movie, not only a series of frames), developing deeper insight through social analysis (not what is seen but what is seen in, i.e. the meaning, implications and relevance of something), developing an overview and having some foresight. This is the difference between observing data, gathering information, gaining knowledge, developing insight and finding wisdom. One has to see, but not with one's eyes only, no longer blinded by one's eyes. There are those who have eyes but do not see, ears but do not hear (Jer. 5:21). This need to recognise the invisible is widely recognised in the biblical roots of Christianity, in Greek philosophy, in Patristic Christianity and in indigenous African culture alike. It is also part of common human experience. After all, one cannot see someone's personality, friendship, love, a university, a country or indeed the world as such. One may watch soccer but one cannot see 'soccer'. One may adopt a worldview but one cannot the view the world as it were at a distance if one necessarily participates within it. In order to see the invisible, one's eyes need to be directed and guided by insights. At best these are derived from hearing what others have seen. One's eyes have to be directed by one's ears. Each of these aspects of seeing assumes the role of the human imagination.

Moreover, there is a tension between seeing what something is and sensing what it should be (e.g. knowing God's will). In English this ambiguity is embedded in the term 'vision': it captures what is visible and places that in a wider perspective, but also transcends what is seen by seeing the invisible, for example by beholding an attractive moral vision for the future. While almost every institution may talk about its vision and mission statement, an encompassing moral vision is scarce. Those who have been able to articulate such a vision, and who have helped people to imagine the first necessary steps towards that vision, have become justly famous (e.g. Mohandas Ghandi, Martin Luther King, Nelson Mandela, Desmond Tutu). Such an encompassing moral vision allows for more particular forms of discernment. Charles Wood (1985: 67-68) uses the term 'vision' to indicate a synoptic understanding of a range of data, a grasp of things in their wholeness and relatedness, a seeing of connections. He contrasts this with the need for discernment, i.e. to gain insight into particular situations in their particularity, to appreciate differences, to distinguish. He argues that vision and discernment are dialectically related. There is no vision without discernment and no discernment without vision (Wood 1985: 76).

Such discernment operates at the most basic visceral level and is expressed through a sense of intuition, but becomes refined through moral discernment. As Richard Kearney (2011: 45) puts it, reading the face of the other is difficult: the stranger knocking on the door of the house may be the Lord coming to invite us to a feast – or a murderer and a traitor. Discernment implies the need to see the difference between hospitality and hostility. Such discernment remains insufficient if it does not inform judgement, implementation and oversight – yet another form of seeing.

There may well be a tension between seeing reality from different perspectives. There is a world of difference between seeing someone as a hardened gangster and as a child loved by his parents, between seeing a piece of land as nothing but a toxic rubbish dump or seeing it nevertheless as God's own garden. Desmond Tutu (2005: 97) comments: 'People really are wonderful. This does not mean that people cannot be awful and do real evil. They can. Yet as you begin to see with the eyes of God, you start to realize that people's anger and hatred and cruelty come from their own pain and suffering. As we begin to see their words and behaviour as simply the acting out of their suffering, we can have compassion for them.' One may say that the Christian story is called forth by such tensions. It enables us to see that the seeing can be blind and the blind may be able to see (see Lathrop 2003: 34).

On this basis I would argue that the haptic is indeed the most basic and also the most fundamental of the (human) senses, while tasting and smelling allow for more differentiation. Such discernment (a visual metaphor) is transcended exponentially by seeing, especially if multiple levels of seeing are acknowledged. However, given the mimetic and semiotic structure of images, they are necessarily multi-layered. The word comes to our aid in order to surmise the deeper layers of meaning in such images. Hearing is therefore even more differentiated: since we do not always know what we see, the word guides us towards the significance of the sign. Since words are signs, they too are multi-layered, allowing for a sense of transcendence and therefore of mystery and intuition. Music (for example singing hymns) brings the senses together since it connects the haptic (playing an instrument) with the eye (requiring hand-eye coordination; optical touch and haptic vision) and the ear (enfolding sound interspersed with words amidst the encompassing silence) in order to shape the (liturgical) atmosphere. In religious rituals, for example in the liturgy, there is a complex interplay between the human senses in which ritual dancing (the tactile senses), incited by burning incense (the nose), food and drink (the tongue), together with body language and gestures (the eye), lay the foundation for language (the ear).

Some Pneumatological Reflections

As I observed above there are strong arguments as to why the ear may be regarded as more spiritual than the eye. This need not be related to a Hellenising tendency to privilege the cognitive over the conative or the emotive. Again, the deepest intuition is related to a forensic understanding of justification. The Christian gospel is at its very core a message – communicated as a word of forgiveness despite the (haptic) alienation, the rotten decay, the (visual) deception or distortion introduced by sin. This is emphasised especially in Reformed circles where the emphasis is placed so strongly on the Word of God. Salvation, I often heard in my student years, is born *ex auditu Verbi*. Churches are therefore built as 'mouth-houses' (Luther), with elevated pulpits.

Such privileging of the ear accounts for the emphasis on education, knowledge and scholarly erudition. However, the suspicion raised by many inside and outside a Reformed context is that such an emphasis on the word is also responsible for the intellectualising tendencies so often associated with the reformed tradition – at worst in fundamentalist circles but also in milder forms in evangelicalism and reformed orthodoxy. Does the privileging of the ear imply a thinly veiled preference for the ideal over the material, the spiritual over the bodily? Are words (directed at the ear) 'higher' or more 'significant' than other, more 'natural' signs such as animal tracks (perceived by the human eye) – as has been presumed since Augustine (see Jüngel 1983: 4–9)? Understandably, the long-standing emphasis on the word, on the ear and eventually on the rational, prompted the responses of Pietism (with its emphasis on the heart) and later of Pentecostalism (with its mastery of audiovisual technology).

Theologically, the question is how to understand the relationship between the Word that became flesh and words about the word that became flesh (the gospel), between word and sacrament, word and salvation, gospel and culture, church and world, theology and sociology. How can the gospel transform the world? Merely through the spread of new ideas? Through new information and the communication of knowledge? Can ideas really change the world or does change come only through material processes, through bottom-up causation? Or does change come through the transforming presence of the Saviour? Is the gospel more than a mere idea, a different perspective, another interpretative framework, a view of the world, the 'eye of faith', seeing the world through God's eyes? How, then, should Marx's eleventh thesis on Feuerbach be understood – 'The philosophers have only interpreted the world, in various ways; the point is to change it'?

The problem here is exacerbated by an implicit disgust for that which is bodily, capricious, corruptible and perishable (flesh, defecation, degeneration, mortality), often viewed as our 'bondage to decay'. In response, salvation is understood as countering the gravitational pull of transience. Sharon Butcher (2007: 325) comments: 'Horrified by the Eucharistic liquidity of life, we have developed and carried through an articulation of Spirit an autoallergic reaction to our own humus, our mortal flesh and earthly habitat. Sublime Spirit has been opposed to futile flesh and underscored by a dissociative abhorrence of the material, organic, biotic aspects of being. Loathing insures that, while we are within the force field of the earth, we hold ourselves 'apart from' the earth.' By contrast, the remarkable opening verses of the first letter of John suggest that the ear, the eye and the hand can scarcely be separated and that all three theses sense contribute to a sense of joy:

We declare to you what was from the beginning, what we have heard, what we have seen with our eyes, what we have touched with our hands, concerning the word of life – this life was revealed, and we have seen it and testify to it, and declare to you the eternal life that was with the Father and was revealed to us – we declare to you what we have seen and heard so that you may also have fellowship with us; and truly our fellowship is with the Father and with his Son Jesus Christ. We are writing these things so that your joy may be complete (1 John 1:1–5, NRSV).

How, then, can one do justice to both the verbal (Word) and the bodily (flesh)? This remains a vexing problem, given the tendency towards on the one hand a spiritualising and alienating escapism (where knowledge of the world provides an escape from that which is bodily, fragile, subject to change), and on the other a scientific reductionism (where words are regarded as a function of genes, brain chemistry, economic conditions, sexual drives, etc.). The value-richness of higher levels of complexity should be recognised without reducing salvation to that – otherwise ignorance would be regarded as the main underlying problem, while salvation may be equated with education, cultural refinement or development. The salvation of the earth has to include the biophysical levels that make the emergence of such 'higher' levels of complexity possible in the first place. Salvation therefore cannot be associated with the word as if it is the word that has to save the flesh by elevating it to the level of the verbal.

Christianity has often been criticised for harbouring various forms of dualism. However, strangely enough, such dualisms are preferable to the extremes of escapism (disconnection) and reductionism. At least both poles of the dualities are recognised and held in tension with each other (e.g. a soul without a body is a ghost; a body without a soul is a corpse), albeit at the cost of disconnecting them from each other. This allows a fluctuation from the one pole to the other, typically explaining the one in terms of the other. This leaves too much room for domination on the basis of such distinctions.

What is needed, it seems to me, is a re-integration of the visible and the invisible, of the touchable and the untouchable, of music and the encompassing silence. From a theological perspective this is best approached by pneumatological discernment. The Spirit is present in what is concrete, visible and touchable through inhabitation. Yet, matter is not static but moves; it is moved by the Spirit. According to the Christian confession the Spirit is the Giver of Life and especially of new life. What is needed is a discernment of the movements of the Spirit. For me, Calvin's understanding of the relationship between image and word, between letter and spirit, remains a source of inspiration in this regard. Calvin's emphasis on the ear as the vehicle through which God's word may be heard is well-known, but he equally emphasised visual metaphors (Scripture as spectacles, the role of mirrors, illumination by a flash of lightning and the theatre of God's glory), not to exclude the other senses.

Calvin made a distinction between 'dead images' that human beings create and the 'living images' or 'icons' of God's presence that God alone can bring to life. This is not merely a difference in emphasis, because the distinction coincides with true and false forms of religion. Dead images can be identified in terms of the illusion that the image can somehow enclose, contain or circumscribe God's presence. Living images become living if and when they are used by the Holy Spirit to reveal God's presence in and through the image. Randall Zachman (2007: 8) explains this contrast in a paragraph worth quoting at length:

First, Calvin thought that living images live in the field of tension created by the essentially invisible, infinite and spiritual God becoming somewhat visible in finite reality. This field of tension that the God who cannot dwell in temples made by human hands nonetheless dwells in a Temple made by human hands – keeps the living image from creating the illusion that it can somehow enclose or contain God in itself, as is the case with dead images. Whereas Calvin thought that dead images were forged in an attempt to drag God from heaven, living images represent God's descent to us so that we might use them as 'ladders' or 'vehicles' whereby we might ascend to God. Second, Calvin thought that living images transform the person contemplating them into the image of God, from one degree of glory to another, so that we might become more and more like God in order to be united to God. Dead images, on the other hand, attempt to transform God into our own image, in order to make the spiritual and carnal God finite, a prisoner of the image that we create to represent God. Third, living images have both an analogical and anagogical function relationship to the reality they represent. They refer the mind and heart of the one contemplating them to the reality being represented, by means of the similarity and dissimilarity they have with that reality, and raise the mind up anagogically to that reality. Dead images lack this analogical and anagogical relationship to God but instead contradict the reality they claim to represent and keep our minds firmly planted on earth. Fourth, living images not only represent and portray reality but also offer and present the reality being represented. To take but one well-known example, the bread and wine not only represent the body and blood of Christ; they also offer and present that body and blood to us for the nourishment of our souls unto eternal life. Dead images, on the other hand, simply present a reality that is and remains absent from the representation. Human beings are incapable of making images that offer the reality they represent - only God can do this.

This suggests an interplay between image and word, the eye and the ear, where the role of pneumatological discernment is recognised but where the visual is not subsumed under the word. Can this allow for a full appreciation of all the senses?

Conclusion

Theological reflection on the senses is not only about human perception, but, given the inevitability of anthropomorphism, it is also about God's senses: the finger, nose, eye, ear and mouth of God may each be revelatory. The liturgy involves all the senses: the water that cleanses, the food and wine given and received and the word that is heard, not to exclude sensing all the bodies gathered, the lure of music, the scent of incense, the encompassing buildings, the works of art that provide a sense of place and the swallows who also have a home there (Ps 84). Given a religious sense of mystery, there may even be room for a sixth sense of intuition for transcendence, for what lies beyond.

Theological reflection on all the senses is of course tempted to privilege the ear over the other senses. This is not only because of its focus on words but also because of the incredible differentiation that words allow. Such privileging of the word is in my opinion perfectly legitimate as long as the complexity of the word that became flesh is recognised and the spectre of docetism is resisted. At the same time it is also possible to develop a systematic theology in which seeing (and thus images) is privileged. For Christians the point of departure here might well be the ontological priority of the Light of the world and the liturgical focus on seeing the world in this Light. This, too, is perfectly legitimate as long as different levels of seeing are recognised, including seeing what cannot be seen, namely the mystery of the world.

Likewise, it would be possible to take the senses of tasting and smelling as a point of departure in order to develop a systematic theology. Such an approach would tend to focus on God's hospitality that signals: Take, eat, this is my body! This cannot be developed here, but some hints in this regard may be suggestive. In his delightful *Food for Thought* (1983) the South African philosopher Marthinus Versfeld senses that food (together with herbs and spices) constitutes the clue to the meaning of almost everything else. He says: 'Eating is not only a physical process; it is also a spiritual process. Your food could not enter your mouth did it not first enter your mind. You are what you eat, but you also eat what you are. You pour a spiritual sauce on what enters your mouth, like an act of sex which is clothed with imagination' (Versfeld 1983: 52). One further quotation from this book may suffice:

The good life, then, is ... where the water or wine we drink ... has not lost its corporeality because it is the eternal drink which will take away all thirst. Hence we talk of *tasting* life, of *tasting* God, the gustation of God, when our flesh and blood call for the Living God – our flesh and blood, not a meagre spiritual ego born of desire and abstraction and attempting to nourish itself on the thin soup of success (Versfeld 1983: 17, emphasis in original).

What, then, about the sense of touch? To discern the loving presence of God in our midst requires more than the eye and the ear. To sense God's compassion the tactile senses (including instinct) may be more appropriate and more fundamental. Indeed, the sense of touch may be more 'spiritual' than the eye or the ear. The role of the tactile senses may also help one to recognise the dimension of faith as embodied trust. Such trust is crucial to explain the source of moral energy that could support an appropriate ethos and praxis.

It might not be easy to do full justice to all the human senses all at once. However, this much is clear: To recognise the significance of the emotive dimensions of human existence alongside the cognitive and the conative requires attention to all the human senses.

Bibliography

Butcher, S. (2007). Grounding the spirit: An ecofeminist pneumatology. In L. Kearns & C. Keller (Eds.), *Ecospirit: Religions and philosophies for the earth* (pp. 315–336). New York: Fordham University Press.

Conradie, E. M. (2013). Saving the earth? The legacy of reformed views on 'Re-creation'. Studies in religion and the environment (Vol. 8). Berlin: LIT Verlag.

- Conradie, E. M. (2015). *The earth in God's economy: Creation, salvation and consummation in ecological perspective* (Studies in religion and the environment, Vol. 10). Berlin: LIT Verlag.
- Ingold, T. (2000). The perception of the environment: Essays in livelihood, dwelling and skill. London/New York: Routledge.
- Ingold, T. (2011). Being alive: Essays on movement, knowledge and description. London/New York: Routledge.
- Jüngel, E. (1983). God as the mystery of the world: On the foundation of the theology of the crucified one in the dispute between Theism and Atheism. Grand Rapids: W. B. Eerdmans.
- Kearney, R. (2011). Anatheism (Returning to god after god). New York: University of Columbia Press.
- Lathrop, G. W. (2003). Holy ground: A liturgical cosmology. Minneapolis: Fortress Press.
- Ricoeur, P. (1978). The rule of metaphor. London: Routledge and Kegan Paul.
- Tutu, D. (2005). God has a dream: A vision of hope for our time. New York: Double Day.
- Versfeld, M. (1983). Food for thought: A philosopher's cook-book. Cape Town: Tafelberg.
- Volf, M. (1996). Exclusion and embrace: A theological exploration of identity, otherness, and reconciliation. Nashville: Abingdon.
- Wood, C. M. (1985). Vision and discernment. Atlanta: Scholars Press.
- Zachman, R. C. (2007). *Image and word in the theology of John Calvin*. Notre Dame: University of Notre Dame Press.

Ernst M. Conradie is Senior Professor in the Department of Religion and Theology at the University of the Western Cape in South Africa where he teaches Systematic Theology and Ethics. He works primarily in the field of ecotheology. His most recent monographs include *Saving the Earth: The Legacy of Reformed Views on Re-creation* (LIT Verlag 2013) and *The Earth in God's Economy: Creation, Salvation and Consummation in Ecological Perspective* (LIT Verlag 2015). This essay draws from the latter monograph.

Chapter 14 A Look at Reason Through Love's Eyes: The Sense of Meaningfulness Within a Bodily Context

Roland Karo

Abstract The paper explores the issue of ego deflation. I will look at the concept of ego death recurrent in mystical literature, asking why it is described by the mystics as a positive, euphoric and ecstatic rather than negative and disintegrating experience. The analysis relies on St. John of the Cross' mystical poem *Llama de amor viva*. Using the insights provided by the poem I will try to *look at reason through the eyes of love* and see how the notion of meaningfulness fits in with those of ego death and love. In line with Antonio Damasio's ideas, I will argue that the core of the ego death experience is *hugely underdetermined* by its cognitive content. Using the notions of Apollonian vs. Dionysian aesthetics I will conclude that the experience depends on *relational* rather than cognitive qualities.

Keywords Bonding • Depression • Descartes' error • Dopamine • Ego deflation • Embodiment • Gestalt • Love • Oxytocin • Sex hormones • Somatic markers

Introduction

When first pondering the topic of ECST XV – *Do Emotions shape the world* – I recalled a seminar we had with some ESSSAT colleagues in Rome in May 2013. My presentation was on the links between interpersonal and spiritual bonding, i.e., love. So the conference theme became for me: *Does love shape the world? What do we know of its biochemistry and psychophysiology? What is its role in theology and religious experience?*

I have been into the neuropsychological underpinnings of mystical states – which I believe are a special form of love – for years and am trained as a Christian theologian. Given this background, the above questions are not that novel. What intrigued

R. Karo (🖂)

University of Tartu, Tartu, Estonia e-mail: roland.karo@ut.ee

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_14

me was a 'twist' in the topic created by one of the root texts behind this year's conference. It is Antonio Damasio's seminal *Descartes'Error* ([1994] 2005), with its insight that our cognitive processes are always 'toned' by somatic markers and emotions.

A young colleague Maria Härmas, who also presented a paper at ECST XV, has been working on the idea that in certain cases one can think of clinical depression as involving something comparable to the Christian notion of *kenosis* or ego deflation. Since ego deflation is one of the central aspects of mystical states, I found myself wondering why it is that in the case of depression it is experienced as disintegrating and negative, but in the case of mystical experiences as empowering and positive. What follows, then, is an attempt to answer this question – from the Damasio-oriented viewpoint that ideas can be strongly underdetermined by cognitive content and the same cognitive pattern may work out as a totally different experience depending on the emotional and visceral 'input.'

Ego Death – The Concept

One of the central tenets of ecstatic-mystical states (EMS) and, in fact, other types of intense spiritual and religious experiences is a radical shift in one's sense of self. This was underlined by William James in his classical analysis of EMS ([1902] 1964), and has since been strongly emphasized by other researchers as well (see an overview in Andresen 2002). The radical nature of it is clearly reflected in the metaphors used in mediating the experiences – those of birth and death. For instance, religious conversion is routinely described *via* one's being *born again*. In Zen, enlightenment is sometimes called the *great death* (Austin 2006: 93–94¹). Or consider the following quote by Phil Kapleau in which he describes his first *satori*-experience:

'The universe is One,' he began. [...] 'The moon of Truth – 'All at once the roshi, the room, every single thing disappeared in a dazzling stream of illumination and I felt myself bathed in a delicious, unspeakable delight. [...] For a fleeting eternity I was alone – I alone was. [...] 'I have it! I know! I am everything and everything is nothing!' I exclaimed more to myself than to the roshi, and got up and walked out. [...] It was before me all the time, yet it took me five years to see it. [...] Feel free as a fish swimming in an ocean of cool, clear water after being stuck in a tank of glue. [...] and so grateful (Kapleau 1967: 228–229).

Here, the motif of rebirth and transformation is contained in the amusing analogy of a fish stuck in a tank of glue. The core of the experience is, thus, reorientation and an escape from a blind alley.

Not only are the metaphors of death and rebirth recurrent in mystical literature. The two are hopelessly intertwined. Rebirth is experienced *via* (symbolic) death.

¹In an interesting aside, Austin also notes that in French 'little death' or *petit mort* denotes orgasm (2006: 93). This is an intriguing metaphorical parallel, because neurologically the human capacity for EMS may have evolved as an exaptation with a basis in sexual responses and interpersonal love (Karo 2009: 150–169).

Moreover, a considerable portion of religious rituals are centered around the deathrebirth axis. The idea is clearly represented by the Christian baptismal rite – one's dying for sin and rebirth towards and for God. The 'old Adam' must die so the 'new Adam' can emerge.

Within the context of EMS it is usually assumed that the old Adam on death row is one's self-centered mode of being, i.e. one's ego. Hence the expression 'ego death' used for certain kinds of EMS. As Andrew Cohen points out, the concept of ego ought to be viewed on two levels. On the first, ego is simply an organizing principle, with a straightforward function, neither positive nor negative (Cohen 2000: sec. 3). This is *not* what mystical practices are aimed at 'mortifying.' It is Cohen's second, demoniac ego level which is about having a 'self' nature based on pride, arrogance and narcissism. He writes:

When this ego is unmasked, [...] one finds oneself literally face-to-face with a demon – a demon that thrives on power, domination, control and separation, that cares only about itself and is willing to destroy anything and everything that is good and true in order to survive intact and always in control. This demon lacks any capacity for empathy, compassion, generosity or love; delights in its perfect invulnerability; and, worst of all, will *never* ever acknowledge that which is sacred (Cohen 2000: sec. 3).

When stated in this way, it is hard not to agree that the death or deflation of the devilish side of ego is a noble aim to pursue. In real life, however, the second level ego aspects permeate the first level. What, for example, about a person's entirely honorable pride in being an American? This is why, as Cohen puts it, most people find overcoming the ego-biased perspective (which is the core of EMS) too high a price to pay for a healthier, simpler and more relational lifeview (Cohen 2000: sec. 7).

The painful way out of the domination of ego is beautifully described by St. John of the Cross. In commentary no. 20 to the first stanza of his famous mystical poem *Llama de amor viva* ('The Living Flame of Love') John discusses how God heals the soul (the deepest core of one's self) of her impurities. The process is painful – like literally placing one's heart in fire to burn it clean of any kind of demon (Tobias 6: 8). The soul's previously hidden and unfelt weaknesses are ruthlessly brought to light, set before her eyes to be felt and, finally, healed. To describe how this happens John offers his readers a metaphor: the dampness of a log of wood may go unnoticed until it is exposed to fire and, instead of flaring up, it starts to smoke and sputter. This is also what first happens to the impure soul as it is touched by divine fire (1919: 17–18).

In seeing how this relates to ego death in EMS, it is first important to note that John's metaphor clearly reflects the tripartite schema of Christian mysticism – that of *purgatio*, *illuminatio* and, finally, *unitio*. Because of its impurities, the soul first has to be purged (compare to Cohen's ideas above). In the heat of the divine fire the 'log's' humidity vaporizes gradually and then, at a certain point, it flares up (*illuminatio*). Finally – and this is how John's view relates to ego death – as she is consumed by the fire, the human soul unites with God (*unitio*). The first two stanzas of John's poem (in W. Barnstone's translation [St. John 1972: 57] are especially rife with meaning in this respect:

O living flame of love, how tenderly you wound my soul in her profoundest core! You are no longer shy. Do it now, I ask you: break the membrane of our sweet union. O soothing cautery! O wound that is a joy! O gentle hand! O delicate touch tasting of eternity, repaying every debt. Killing, you turn my death to life.

The association with burning away is even stronger in Kieran Kavanaugh and Otilio Rodriguez' translation. Here, the last two lines of stanza 1 read as: 'now consummate! if it be your will: / tear through the veil of this sweet encounter!' (St. John 1991: 639–640). Phenomenologically, what we have here is a cluster of interrelated notions of death, piercing, wound, love, passion, fire and consummation. In short – a soul burning to blissful death in God's loving fire – another rebirth *via* dying. 'Llama' is, thus, a love poem but one that equates perfect love to (ego) death. In addition to the references to wounding and the explicit mentioning of killing in the second stanza, John is quite clear in his commentaries that the 'breaking of the membrane' of the soul is meant as a metaphor for death.

The numinous character of the soul's encounter with the Divine is accentuated by the repeated pairing of opposites. Paradoxical expressions such as *joyful wound*, *soothing cautery* etc. mark the liminality and ineffability of the poet's feelings. However, the 'final curtain,' the veil or membrane of the mortal self or ego still stands in the way of perfect union and intimacy. Thus the soul pleads God, 'if it is your will, tear through the veil of this sweet encounter' (St. John 1991: 639–640). In effect, what is said, is – kill me, if it is your will, in this sweet encounter, for 'Killing, you turn my death to life' (St. John 1972: 57). Perfect union, thus, is likened to dissolution or emptying, a kind of ecstatic kenosis.²

John's concept of the soul's veil or membrane is informative in several ways. It is by tenderly wounding the soul that love frees her from her isolated, narcissistic cocoon. Intriguingly, Andrew Newberg and colleagues have argued that neurally the decentering of the ego during EMS occurs as the area responsible for maintaining a clear-cut body image deactivates in response to meditation. The result is that the

²As a side note: the above quoted verses are highly eroticized. John's background culture conceptualized the human soul in feminine form (Latin *anima* vs. *animus*) and the Divine in masculine terms. Love's tender wounding of the soul is thus unquestionably erotic. Moreover, the phrase *tear through the veil of this sweet encounter* is almost certainly sexual, hinting at the penetration of the bride's hymen. Recall that for John, the 'veil' is an obstacle standing in the way of real knowing. As such, it has to be penetrated, pierced by the fiery, divine 'sword.' No wonder, then, that this delicate touch is connected to true intimacy! In this light, it is quite clear how the notion of death can go hand in hand with death's exact opposite – the conception of new life and hence also sexuality. It becomes understandable how the soul can plead *kill me*! and at the same time affirm being more alive than ever before. This gives an interesting additional 'undercurrent' to the French idiom *petit mort*.

brain is unable to define the outer limits of the body. This leads to the perception that there is no such thing as an individual ego or self (d'Aquili and Newberg 1993: 187 ff). Clearly, the phenomenology implied in Newberg and colleagues' hypothesis echoes John's poetic expressions – the notion of the breaking of the fragile membrane keeping the individual self apart from the rest of the cosmos is there in both cases.

More importantly, however, note how John links love, death and ecstasy. Love invariably (except for narcissistic self-adoration) involves a shift in one's personal 'center of gravity' towards Another, a You. A ME becoming a me. The center of one's life is no longer an isolated self. Mystics have always known that in order to receive something (grace, illumination, revelation), one has to give something else up (think of the Christian concept of kenosis and the Buddhist void; see Karo and Friedenthal 2008 for an in-depth discussion). The soul is now related (one of the original meanings of *religio* in Latin is bonding between humans and gods), one no longer faces the prospect of dying a fruitless, narcissistic, ego-dominated death. As it is beautifully put by Matthew, 'For those who want to save their life will lose it, and those who lose their life for my sake will find it' (16: 25, NRSV). Thus, ego death should not be seen as an end in itself. Mortifying self-centered desires – which is what ascetics have done for centuries – is noble. But the consummation of the soul in the divine fire (and hence ego death) is the 'fruit' of love. This is different from exercising ruthless control over and finally killing the ego. The essence of it is (or should be) more like falling in love.

Apollonian vs. Dionysian Hermeneutics of Ego Death

The point that the essence of the ego death experience should be thought of in terms of falling in love serves as a launching platform for the analytic section of this paper. It is centered around the question of why and how the concept of death – which is about disintegration – here acquires the meaning of love – which is about integration and bonding. How can death function as a revitalizer? How can it be euphoric and positive?

I find it useful within this context to refer to Apollonian *vs*. Dionysian hermeneutics, borrowing the idea from aesthetics. Mediating Nietzsche's points on the subject matter, Andrew Newberg and Eugene d'Aquili write:

Apollonian aesthetics represents what is usually considered the aesthetics of beauty and light. It comprises a sense of wholeness and harmony and is affectively marked by a sense of pleasantness, [...] joy or elation. Dionysian aesthetics, on the other hand, named after the myth of Dionysius, who is torn apart alive by the Bacchae, is marked by a sense of fragmentation, disharmony, death, or dying, and is affectively marked by [...] fundamental hopelessness, futility, and even terror (2000: 40).

Within such a framework, ego death (or deflation) should undoubtedly be a Dionysian type of experience, leading to disintegration and anxiety. That is, indeed, what we see in the case of mental disorders involving radical ego shifts.

Depersonalization is a feature which is characteristic of forms of psychoses, ego deflation is a key component in clinical depression and represented by the feeling of personal worthlessness and the resulting sense of meaninglessness of everything. It is correlated with growing anxiety, angst and a loss of purpose in life. This is in line with the Dionysian quality of ego death. But as we saw above, for the mystics ego death rather leads to a newly found harmony and elation, an Apollonian type of experience. It is perceived as revelatory of a fundamental truth, deeply blissful and uplifting.

The key issue to be kept in mind in sorting the problem out is that the *cognitive content* of ego deflation is virtually the same in the case of depression and EMS. Its experienced 'valence' or hermeneutics – Dionysian or Apollonian – must therefore depend on noncognitive factors. This is to say that meanings are *strongly underdetermined* by cognitive processes. Whether something is experienced as making sense or leading to meaninglessness, then, depends on various additional inputs – from complex affective (e.g., one's being in love may significantly alter one's perception of a piece of poetry) to visceral and somatic. In fact, Bud Craig uses a specific term – *the feeling of knowing* – to underline the somatic and affective inputs to cognition (Craig 2009: 61–64). These inputs also define whether a particular idea *matters* to one (if not, then it is experienced as empty sophistry).³

Interpreting ideas is, thus, not about 'pure' hermeneutics – its direction may be foreset by visceral markers. Brainwise, this means that intellectual insights are far from being a purely neocortical 'thing.' They heavily rely also on older brain areas – limbic and paralimbic (the amygdala, hippocampus, hypothalamus, insula and cingulate cortex).

This is *not* to say, however, that cognitive processes have nothing to do with whether one experiences ego death *via* an Apollonian or Dionysian 'gestalt.' Clearly, for example, one's metaphysical views play an important role in the outcome. St. John sees the ego as an obstacle on the way of true intimacy. Hence, an experience of ego deflation actually *increases* unity, relatedness and harmony – leading to Apollonian hermeneutics. On the other hand, given how highly individualistic (ego-dominated) and personal achievement oriented today's Western culture is, it is no wonder that the average citizen will experience ego deflation as threatening and depressive, leading to feelings of fragmentation and meaninglessness – precisely because of the weight and importance invested in the Almighty Ego. But different metaphysical underpinnings cannot explain St. John's emphasis above on *love*, embodied and visceral. To address this issue, it is useful to look briefly at the neurochemistry of love and depression.

Generally, it is uncontroversial that the varieties of bonding known to humans as love all originated from the parent-infant attachment. Lisa M. Diamond, for example, argues that adult pair bonding is, in evolutionary terms, an *exaptation* – a sec-

³Within this context, it is fitting to recall Paul Tillich's analysis of faith, in which he strongly emphasizes that religion is not that much about intellectual beliefs. It is more about being ultimately concerned (Tillich 1955: 152–160). In other words, beliefs are important but in order for them to embody religion, they must *matter* to one.

ondary use of a biological 'apparatus' that originally evolved for another reason, in this case to facilitate parent-infant bonding (2004: 117). According to Helen Fisher and colleagues, adult love combines the oxytocin-based parent-infant bonding with two more systems: (a) the evolutionarily ancient sex drive (mediated *via* testoster-one and estrogens, T and E) and (b) dopamine-fuelled courtship attraction (Fisher et al. 2006: 2173f). The latter is largely responsible for the euphoric feelings and the idealization of the beloved. The deep bonding is mediated *via* the oxytocin system and the erotic tension activated by the sex steroids.

Now, I have elsewhere argued that neurally EMS represent a further development of interpersonal love's neurochemical 'cocktail' (Karo 2009: 159–167, 2014). As far as religion is about empathetic bonding and as far as EMS are euphoric, there is every reason to believe that EMS heavily rely on oxytocin and dopamine. According to Nick Hanson, oxytocin triggers blissful, oceanic feelings of peace, love, relaxation and rightness. Hence, it provides an internal reward for all bonding behaviors – including spiritual bonding with God (Hanson 2010: sec. 23–30). The role of dopamine in EMS is confirmed by many studies. In fact, it has been proposed that the dopamine system is central to religious and spiritual functioning (Previc 2006).

Depression, on the other hand, is neurochemically correlated with the effects of stress hormones such as cortisol and epinephrine. The first of these affects metabolism, the other is involved in attention deficit hyperactivity disorder and hypertension, in addition to depression. Since oxytocin and dopamine levels are down, one feels left alone and low. This means that in the case of EMS the cognitive concept of ego death is experienced *via* the 'eyes of love' – quite literally, with dopamine mediating the exhilaration of the experience and oxytocin the feeling of connectedness to everything that exists. In the case of depression, ego death is experienced *via* a Dionysian 'gestalt,' one of being left lost, alone in and disconnected from the world. Based on this, one can clearly say *yes* in answer to the question raised by this conference – *do emotions shape the world*? An ego death seen through the eyes of love is unquestionably different to one seen through the eyes of despair. Emotional and visceral inputs provide basic 'gestalts' that condition and 'color' the experience of ego deflation.

This point is further illustrated by James Austin's confession of his experiences during the treatment of prostate cancer. Prior to radiation he was to undergo a 3-month antiendocrine therapy. This consisted in artificially bringing down T levels. Recall that T and E are central 'players' in love beside dopamine and oxytocin. Austin says that it is *via* this therapy that he learned to know a strange 'alternate world' in which there is no erotic desire and no sexual interest – not to mention the lack of all physical and behavioral manifestations of these desires (Austin 2006: 262–263). Austin emphasizes that even though the (luckily brief) episode was revelatory he would not recommend the experience to anyone. Because the 'world of T deprivation' is shaped radically differently from the one known to us – one in which creative tension (*eros*) permeats everything from interpersonal bonding to cultural and scientific discoveries. And in Austin's case it was just T whose levels were 'tampered with.' But think of the neurochemical 'cocktail' that flares up in one's veins in falling madly and deeply in love! There is no question as to whether

emotions shape the world – that of one in love is radically different from that of one out of it.

Coming back to ego death: during EMS it is experienced in loving terms, as a form of bonding. A fitting analogy would be the shift in one's outlook on life around the birth of one's children. It creates a sense of meaningfulness and harmony vs. meaninglessness and isolation, despite the fact that, intellectually, death is a disintegrating concept. Whether one experiences the surrounding world as making sense or as fundamentally meaningless is hardly achieved with one's metaphysical beliefs only. The sense that something matters or is meaningful is deeply somatic, embrained and embodied. The sense of meaningfulness is precisely that – a *sense*, a bodily sense. The latter is something that Newberg and colleagues have discussed in relation to why some intellectual solutions to age-old, mythical problems are highly successful and some are not. The point is that the reality and truth of a solution must be *bodily experienced as bringing relief*. Mere intellectual appeal is not enough (Newberg et al. 2002: 70–73).

To draw this section to a conclusion: the cognitive discrepancy in how the Dionysian-type concept of ego death can be experienced in Apollonian ways is resolved as follows. Yes, the experience decentralizes and deflates the ego, but it comes with an illuminating and liberating experience of being loved. Therefore, the deflation and disintegration of the ego is experienced as liberating rather than scary. It *is* a disillusionment, but one that leads to greater harmony and to a healthier perspective. The illusory quality of the egocentric view is directly experienced, and the fundamental relatedness of everything revealed. The same point is made by Jennifer Rindfleish as she discusses ego death, pointing out that any attempt to consciously kill the ego – as many an ascetic has tried – will be in vain because *there is no self to get rid of.* Only our ego-oriented identification makes us think so (Rindfleish 2007: 71).

From Isolation to Relationality: The Special Case of Ecstatic Epilepsy

The above ideas are admittedly somewhat lofty. They are insufficiently connected to actual descriptions of mystical states and to particular neuropscychological analyses of EMS, love and depression. To balance this bias out a little – but also because I think it is of high interest – let me now turn to a couple of medical cases of *ecstatic epilepsy*. The cases are intriguing within the present context because they are phenomenologically highly similar to EMS, but instead of ego deflation they tend to involve ego *in*flation.

Most reported ecstatic epileptic states are intensely concentrated on pleasurable interoceptive sensations. Thus, we have on the one side anxious, negatively charged and isolating experiences of ego deflation typical to depression (St. John uses the phrase *dark night of the soul* to denote these). On the other side there are experi-

ences of ego deflation that lead to enhanced unity of the soul with everything that exists and that are experienced as revelatory and utterly positive. And then in between there are states that are highly ecstatic and are similar in their phenomenology to mystical union, but which are paradoxically highly concentrated on the ego.

The idea of ecstatic epileptic seizures was originally derived from Fyodor Dostoevsky's writing. As Shirley Rayport and colleagues note, it was initially met with suspicion by influential neurologists but has since been proved to be useful in studying both spirituality and human sexuality (Rayport et al. 2011: 559). I will first introduce three cases from Fabienne Picard and Bud Craig's 2009 analysis, and then discuss how they relate to the above passages on ego death.

- (1) A 53-year-old female patient describes epileptic seizures beginning with sensations of warmth filling up her body and leading to a feeling of complete serenity, total peace. She says it feels beautiful, with no worries. During seizures she feels very conscious, more aware, and sensations become 'bigger.' She notes that the closest experience to this would most likely be orgasm but that the actual experience is not at all sexual. Rather, it is religious thanks to these experiences, she no longer fears death. She reports seeing the world differently since having such seizures every sensation is stronger. For instance, her color and music perception is more detailed and enhanced (Picard and Craig 2009: 540).
- (2) A 37-year-old male patient describes seizures that begin as a pleasant 'halo' filling his inner body. He says it is a well-being inside, a sensation of 'velvet' and of being sheltered from anything negative. The feeling is that of being *really present*, rooted to the spot with a more developed consciousness. According to the patient his 'inner body rises from an unalterable bliss. I escape into the time space of my body. It is a moment of fullness in the loophole of time, a return to myself. It is an unconditional, privileged moment of inhaled sensations' (Picard and Craig 2009: 540).
- (3) A 64-year-old female patient reports ecstatic seizures that are experienced as wellbeing and spiritual consonance. She says that the immense joy that fills her during the events is above physical sensations. It is a 'feeling of total presence, an absolute integration of myself, a feeling of unbelievable harmony of my whole body and myself with life, with the world, with the 'All'. I feel very, very, very present at that time; the consciousness of myself is very increased [...]. I am one hundred percent concentrated on myself.' The patient says this also leads to an experience of no time and space (Picard and Craig 2009: 541).

As you can see from the above, what these patients are saying is highly reminiscent of mystics' descriptions of EMS. Qualities such as sharpened awareness and senses, altered perception of time and space, elation and, in the case of the first patient, the long-term effect of loss of fear of death are clear landmarks of EMS. But what is lacking is the characteristic shift in ego-awareness that in the case of mystics usually results in a long-term personality change towards a more allocentric and empathetic pattern of behavior. Even though the third patient mentions a sense of harmony with everything that exists, the emphasis is still very much on the ego – she is 100 % concentrated on herself.

Recall that the concept of religion is about bonding (Latin *religare*, 'to bind together'). Insofar as authentic EMS can be seen as experiential bases for religion, it makes sense that their ego-deflation component enhances one's sense of empathetic *relation* to all else. But the described cases of epileptic ecstasy rather enhance self-contained pleasure. In other words, what is lacking in them is the loving bonding clearly at the forefront of St. John's writing. This renders the described ecstatic states Dionysian and disruptive in the above sense – *despite their being experienced in positive ways*. In a way, then, paradoxically these states are comparable to those experienced during deep depression – despite their positive tone.

One can speculate that the euphoric quality of the above epileptic states has to do with the dopamine system. Given that one of the characteristic features of depression is dopamine 'starvation,' the mechanism of anti-depressant drugs is to enhance dopamine, serotonin and norepinephrine levels. Here, then, one has states that *should* – given the Dionysian cognitive basis – work out as negative experiences but are instead euphoric. This is likely to be due to enhanced dopaminergic activity triggered by epileptic discharges in the limbic and paralimbic systems of the brain.

Using Fisher and colleagues' tripartite schema (above) of interpersonal love, we could say that the epileptic states of ecstasy lack the mother-infant or oxytocin component. On a more theologically oriented level, though, one could also say that they are an example of 'soul loss' – in the sense of one's being unable to relate (God's breath as soul and also our relation to the rest of creation; compare this with C. G. Jung's analysis of *anima* [or soul] function). The same would go for clinical depression. In both cases one's center of being is confined by the ego.

Given this analysis, it seems that the decisive issue in understanding the nature of EMS in comparison to psychological and neurological disorders is how it affects one's perceived *relation* to all else. Is it loving yearning for bonding or self-contained isolation? In depression there is no catharsis. In this sense, I think, by underlining the relational core of being human, Christianity still has an important word to say to the twenty-first century.

Conclusion

I would like to end my argument by 'translating' what has been said into the more conventionally theological parlance of *logos*, *sophia* and *eros*. In these terms, what I have tried to say above is that it is the connecting, unifying principle of *eros* that helps one break through the dark, ego-dominated 'night of the soul,' and that can enliven the rational *logos* so that it can lead to *sophia*. When St. John of the Cross talks about *breaking the membrane of our sweet union*, he sees the individual ego as a *hindrance* on the way to intimacy. On the other hand, the sense of meaninglessness experienced during depression stems from being stuck in a closed cycle. In the first case, ego deflation works out as a state of loving yearning with overwhelmingly

positive, Apollonian overtones. In the second case, the state is that of being 'stuck in a tank of glue' – to repeat Kapleau's metaphor. In fanatically seeking a way out, to find meaning and joy again, one is more and more under the influence of the demoniac ego trying to remain in control – to the point of shutting down all windows through which light could possibly enter. This is love vs. isolation and despair, even though the cognitive idea is the same in both cases.

Ego death can thus be viewed from within different (emotional) gestalts. The world through love's eyes is a different one from that of despair and depression. Departing from the gestalt of love one can experience a line of reasoning or text as rich and deep in meaning, while the same string of thought or text may feel utterly unconvincing, dry and meaningless to one in depression. With this, I rest my case.

This research was supported by the European Union via the European Regional Development Fund (Centre of Excellence in Cultural Theory).

Bibliography

- Andresen, J. (2002). Meditation meets behavioural medicine: The story of experimental research on meditation. In J. Andresen & R. Forman (Eds.), *Cognitive models and spiritual maps: Interdisciplinary explorations of religious experience* (pp. 17–73). Thorverton/Charlottesville: Imprint Academic.
- Austin, J. H. (2006). Zen-Brain reflections: Reviewing recent developments in meditation and states of consciousness. Cambridge, MA/London: The MIT Press.
- Cohen, A. (2000). What is ego? A report from the trenches. URL: http://www.speakingtree.in. Accessed 20 Mar 2014. Originally published in *What is Enlightenment*?, *17*, 1–2.
- Craig, A. D. (Bud). (2009). How do you feel Now? The anterior insula and human awareness. *Nature Reviews: Neuroscience*, 10, 59–70.
- D'Aquili, E. G., & Newberg, A. B. (1993). Religious and mystical states: A neuropsychological model. Zygon, 28(2), 177–200.
- D'Aquili, E. G., & Newberg, A. B. (2000). The neuropsychology of aesthetic, spiritual, and mystical states. Zygon, 35(1), 39–51.
- Damasio, A. R. ([1994] 2005). *Descartes' error: Emotion, reason, and the human brain*. New York: Penguin Books.
- Diamond, L. M. (2004). Emerging perspectives on distinctions between romantic love and sexual desire. *Current Directions in Psychological Science*, 13(3), 116–119.
- Fisher, H. E., Aron, A., & Brown, L. L. (2006). Romantic love: A mammalian brain system for mate choice. *Philosophical Transactions of the Royal Society B*, 361(1476), 2173–2186.
- Hanson, R. (2010). The evolution of love. *Psychology Today*, February 15, URL: http://www.psychologytoday.com/blog/your-wise-brain/201002/the-evolution-love. Accessed 20 Mar 2014.
- James, W. ([1902] 1964). *The varieties of religious experience*. New York: Mentor Books/The New American Library.
- Kapleau, P. (Ed.). (1967). *The three pillars of Zen: Teaching, practice, and enlightenment*. New York/Evanston: Harper & Row.
- Karo, R. (2009). Eros and mysticism: Are mystical states of consciousness evolutionary byproducts of sexual response? Tartu: University of Tartu Press.
- Karo, R. (2014). God and romance: Love in religion and interpersonal relationships (pp. 359– 378). LXXXIX: Antonianum.
- Karo, R., & Friedenthal, M. (2008). Kenösis, Anamnēsis, and our place in history: A neurophenomenological account. Zygon, 43(4), 823–836.

- Newberg, A. B., d'Aquili, E. G., & Rause, V. (2002). *Why god won't go away*. New York: Ballantine Books.
- Picard, F., & 'Bud' Craig, A. D. (2009). Ecstatic epileptic seizures: A potential window on the neural basis for human self-awareness. *Epilepsy and Behavior*, 16(3), 539–546.
- Previc, F. H. (2006). The role of the extrapersonal brain systems in religious activity. *Consciousness and Cognition*, 15(3), 500–539.
- Rayport, S. M., Rayport, M., & Schell, C. A. (2011). Dostoevsky's epilepsy: A new approach to retrospective diagnosis. *Epilepsy and Behavior*, 22(3), 557–570.
- Rindfleish, J. (2007). The "Death of the Ego" in east-meets-west spirituality: Diverse views from prominent authors. *Zygon*, 42(1), 65–76.
- St. John of the Cross. (1919). *The Living Flame of Love, with His Letters, Poems, and Minor Writings* (D. Lewis, Trans.). London: Thomas Baker.
- St. John of the Cross. (1972). *The Poems of St. John of the Cross* (Trans. and Introduction W. Barnstone). New York: New Directions Books.
- St. John of the Cross. (1991). *The Living Flame of Love* (K. Kavanaugh & O. Rodriguez, Trans.). Washington, DC: ICS Publications.
- Tillich, P. (1955). The new being. New York: Charles Scribner's Sons.

Roland Karo is a researcher in systematic theology at the University of Tartu, Estonia. His work concentrates on the neurological underpinnings of spirituality, religion and ritual behavior. His recent publications explore the intersections between spiritual, sexual and epileptic phenomena.

Chapter 15 Self-Conscious Emotions, Religion and Theology

Fraser Watts

Abstract Emotions are heterogeneous. So, in assessing their religious and theological significance, it is important to make distinctions between different kinds of emotion. One important distinction is between basic emotions that are universal and cognitively simple, and other more self-conscious emotions that depend on greater cognitive elaboration about both self and the social world. It is arguable that self-conscious emotions play a particularly important role in religious life, and that understanding their role in prayer and spirituality can make an important contribution to the psychology of prayer. Theologically, self-conscious emotions are an important element in human distinctiveness. The story of the 'Fall' in Genesis 3 can be read, in part, as a myth about a 'fall upwards' into self-conscious emotions. Self-conscious emotions such as guilt and shame also provide a vantage point for approaching soteriology, and relating different theories of atonement to particular self-conscious emotions can help us to understand their human significance.

Keywords Emotions • Self-Conscious • Development • Evolution • Prayer • Religion • Guilt • Shame • Genesis • Atonement

Introduction

Emotions are very diverse. A key point of this paper is that, in considering the role that emotions play in religion, and in developing a theology of emotions, it is important to distinguish between different categories of emotion. That is no simple matter because, though it is widely recognized that some classification of emotions is required, there is no agreement about exactly how best to do it.

There is, however, a widely accepted distinction between basic and complex emotions, stemming from Ekman (1972), who saw his own work as building on Darwin's book on emotions (Darwin et al. 1998). Ekman proposed a list of six

F. Watts (🖂)

University of Cambridge, Cambridge, UK

e-mail: fraser.watts@cantab.net

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_15

'basic' emotions: anger, disgust, fear, sadness, happiness and surprise. Basic emotions are thought to be universal, and to be recognizable in all cultures and in a range of species. It is further claimed that there is a characteristic facial expression associated with each basic emotion, by which it can be recognized. Basic emotions can be identified in other species by the fact that they show the same facial expressions as humans do in comparable situations.

Even among those who accept the concept of basic emotions, there is disagreement about exactly which emotions should be included in the list. For example, Oatley and Johnson-Laird (1987) reject surprise, arguing that it is a feature of a variety of different emotions. Ekman (1999) has subsequently expanded his list, adding the following emotions that he believed to be universal, if not always associated with the same facial expressions: amusement, contempt, contentment, embarrassment, excitement, guilt, pride in achievement, relief, satisfaction, sensory pleasure, and shame. However, few people would accept such a long list of basic emotions.

Most emotion theorists make provision for complex emotions as well as basic ones, though there is a range of views about how to conceptualise them. There are two main views about how complex emotions arise. One view, held by Ekman among others, sees complex emotions as cognitive elaborations of basic emotions that take into account their social and cultural context. Ekman's position is essentially a two-factor theory: the basic emotions themselves and their contextual elaboration. The alternative view, advocated by Plutchik and Conte (1997) is that each complex emotion is a mixture of basic emotions.

Though once again there is a range of views about complex emotions, there would be reasonable agreement that they appear later in childhood than basic ones, usually in the second year of life or later. One particular theory of complex emotions, which focuses on the complex sense of sense that is involved, is framed in terms of 'self-conscious' emotions (Tracy et al. 2007). Again there is not complete agreement about what to include in the list of self-conscious emotions, but Lewis (2014) lists embarrassment, jealousy, empathy (appearing in the second year) as well as shame, guilt, hubris and pride (appearing in the third year and depending on more developed social representations). There is a good deal of overlap between self-conscious emotions and what Haidt (2003) has called 'moral' emotions. However, I will largely follow here the approach that formulates complex emotions as self-conscious emotions.

Complex, self-conscious emotions have a different evolutionary basis from basic emotions. They not only develop later in infants; they also enter evolution later. It also seems clear that complex, self-conscious emotions are more distinctively human than basic ones. However, it is very hard to make this pretty obvious point without being provocative. The reason is that there is a fierce battle going on between science and religion about human distinctiveness, with religious thinkers often wanting to emphasise human distinctiveness, and many scientists wanting to minimise it (Watts 2002). The reasons why this battle has been joined quite so fiercely go beyond this essay, but I see no reason why there has to be such polarization. Nevertheless, in this context, to say that complex emotions are distinctively human looks as though it is taking up sides in a pitched battle. So, let me make clear that I am not suggesting that there are no antecedents of complex emotions in other species, just that humans differ from other species in complex emotions more than in basic ones. It is clear that human evolution proceeds through a number of transitions (Dunbar 2014). At each point, it seems likely that complex emotions change more than basic ones, and get closer to what is found in humans.

There are several converging arguments for the conclusion that self-conscious emotions are more distinctively human than are basic ones. Complex emotions are not associated with distinct facial expressions that can be found in other species, in the way that basic emotions are. The physical expression of complex emotions is more subtle and flexible than that of basic ones, and often involves the whole body, not just the face. It is also significant that different patterns of expression of complex emotions are found in different cultures. Complex emotions also have a different neural substrate from basic ones, and are more dependent on the neo-frontal cortex that is so significantly developed in humans. One indication of that is that self-conscious emotions are more affected by fronto-temporal lobe degeneration than are basic ones (Sturm et al. 2008).

It is widely recognized that self-conscious emotions play an important role in the regulation of social behaviour. As Dunbar (2014) has emphasized, the growing size of hominid social groupings, and the need to find less time-consuming methods of maintaining social relations than mutual grooming, led to the development of various other ways of maintaining social cohesiveness. I suggest that self-conscious emotions played an important role in this. Like other approaches to social cohesiveness and social regulation in emerging humans, self-conscious emotions would have required increasing frontal lobe capacity and increasingly advanced capacities for social cognition and theory of mind.

In the remainder of this paper I want to suggest, first, that self-conscious emotions are particularly important in religion, and that it would add a fruitful additional perspective in the psychology of religion to examine the role played by selfconscious emotions in religion. Finally, I will suggest that self-conscious emotions are especially important for a theology of the emotions, and I will sketch a theology of human distinctiveness that emphasises them.

Self-Conscious Emotions in Religious Life

After what has been said already, these claims are unlikely to be surprising. Nevertheless, with rare exceptions (e.g. Roberts 2007) there has been surprisingly little attention to emotions in religious life. Also, the religious significance of distinctions between different kinds of emotion does not seem to have been generally recognized, and complex emotions tend to be neglected. For example, in the *Oxford Handbook of Religion and Emotion* (Corrigan 2008), the section on specific emotional states focuses on basic emotions including, from Ekman's list: ecstasy (i.e. happiness), terror (i.e. fear), melancholy (i.e. sadness), and hatred (i.e. anger), but it

includes no core examples of complex emotions. On the other hand, it completely omits self-conscious emotions such as pride, guilt and shame. Strangely, it also includes love and hope which, strictly, are probably not emotions at all. Equally strangely, it omits disgust, a basic emotion which seems highly relevant to religion. It is hard to discern a coherent theoretical position behind the choice of which emotions are covered.

Self-conscious emotions serve a broad range of personal, social and moral purposes. There is widespread recognition that they play a role in the repair of social relationships, and are important for social harmony. Different self-conscious emotions probably do this in different ways. For example, some emotions, like empathy, seem to contribute to social cohesiveness directly; others, such as guilt and shame, seem to facilitate the repair of social tensions. There is a strong body of research evidence to support the contribution of self-conscious emotions to social relationships. For example, deficiencies in self-conscious emotions such as embarrassment contribute to delinquency in children (Keltner 1995).

This social function of emotions intersects with religion in a variety of ways. Self-conscious emotions, especially guilt and shame (Watts 2001), are involved in the processes of moral regulation that are important in religion. In the literature on the cognitive science of religion, there has been much discussion of the role played by fear of supernatural punishment. That could, of course, have a direct regulative effect on behaviour or, alternatively, the mediation of its effects may be more subtle. Bourrat et al. (2011) suggest that the role of fear of supernatural punishment in early human societies was more to ensure participation in the religious community than to regulate behaviour directly, though the former would, in turn, have had a regulative effect on behaviour. The evolution of religion, as I have argued elsewhere (Watts 2014), depends on the emergence of more complex and differentiated forms of cognition, providing a further argument for the close connection between religion and self-conscious emotions.

There are also parallels between the role played by self-conscious emotions in human relationships and in relationships with God. Much prayer takes selfconscious emotions as its starting point; for example a sense of guilt is the starting point for penitence. Prayer may also provide an opportunity for the development of the particular kind of elaborate, relational self-schemas associated with the religious life. The schemas that are important in religious life are similar to those that keep human relationships in repair.

Given the analogy that can be drawn between relationships to God and to other humans, for example in attachment theory (Granqvist 2010), it would be expected that self-conscious emotions could play a similar role in keeping a person's relationship with God in good repair. That will be particularly apparent in the management of sin, or other departures from the perceived purposes of God. A capacity for self-conscious emotions is necessary for people to recognize that they have departed from God's purposes, and to repent, make confession, and to attempt amendment of life. However, the role of guilt in behavioural amendment should not be exaggerated, and in general correlations between guilt reactions and behavior regulation can be surprisingly low (Wright 1971).

To suggest that self-conscious emotions have the same role in relationships with God as they do in human relationships assumes that people relate to God much as they do to another human. Some religious people undoubtedly relate to God in that way, but not all. Many people do not have such an anthropomorphic representation of God. For example, it would probably be less true of liberal than conservative Christians, less true of those whose spiritual practice emphasizes meditation rather than those who use more conversational prayer, and less true of faith traditions such as Buddhism than of the Abrahamic faiths. Of course, it may be that the selfconscious emotions operate in more subtle ways in forms of religion where the image of God is less anthropomorphic.

The relationships between shame, guilt and religion are complex (Watts 2001). The distinction between shame and guilt is a subtle one, and there are two relevant aspects. First, the sense of shame is about the person generally, whereas guilt tends to focus just on specific misdemeanors; second, shame is an emotion that often arises in public, social contexts, whereas guilt tends to be a more private matter. It has been suggested (Lasch 1979) that we are currently in a shame culture rather than a guilt one, though current forms of religion seem to engage with shame less effectively than they do with guilt.

There is a tendency for religion to be associated with guilt, though it is important to distinguish between healthy and unhealthy forms of guilt, and it seems that it is healthy guilt that is especially prominent in 'intrinsic' religious people, i.e. those for whom religion is the dominant motivation. Though there are aspects of religion that seem likely to increase guilt, religion also includes the elements of forgiveness and absolution that seem designed to manage guilt. Shame, unlike guilt, does not seem to be especially high in religious people (Luyten et al. 1998).

Another way in which religion may connect with self-conscious emotions is through attributions. Religious people tend to make religious attributions of positive developments such as healing, whether to God, a religious community, or to healing practices (Williams and Watts 2014). Such attributions often sit alongside attributions to self, rather than replacing them entirely, though they weaken the force of self-attributions. That would in turn weaken the force of self-conscious emotions such as pride and shame. If people are attributing events to God as well as to themselves, their attributions will not feed their pride and shame to the same extent. A distinction has increasingly been made between different forms of pride, recognizing that it is over-generalised, hubristic pride that is most unhelpful.

It would be a theological mistake to see attributions to God as an alternative to other attributions, because God is not a cause like other causes (Watts et al. 2002). Nevertheless, religious attributions are bound to have an effect on human attributions, and to weaken their emotional impact. It seems likely that attributions to God, because they bring other factors into play, both attenuate feelings of pride at success and attenuate feelings of guilt or shame at failure.

It might be expected that the moral values associated with religion would lead it to foster empathy, another important self-conscious emotion. Intercessory prayer could play an important role in that. However, religion may not always be as much associated with empathy as religious people might hope, just as religion is not always associated with actual helping behaviour, for all that religious people tend to believe in helping (Batson et al. 1993). Some kinds of religion probably engender empathy more than others. There is evidence that having an image of God as merciful is particularly associated with empathy (Francis et al. 2012).

There is scope for debate about the personal and social value of self-conscious emotions. Though their value in relationships has been increasingly recognized, they can have negative effects too, leading to a sense of internal struggle and a burden of guilt. They can also feed personal self-preoccupation and narcissism. There are probably quite subtle factors that influence whether their overall impact is benign or not. I suggest that the impact of religion on self-conscious emotions is quite varied, sometimes leading to healthy forms of self-conscious emotion, sometimes to unhealthy forms.

A Theological Perspective on Self-Conscious Emotions

There can be a valuable inter-play between theology and psychology which, amongst other things, helps to elucidate the human significance of religious doctrine (Watts 2010). I suggest that a focus on emotions is an important part of this dialogue between theology and psychology, offering a potentially rich subject of theological reflection, and providing an important perspective from which to develop psychological contributions to systematic theology, especially to theological cal anthropology and soteriology. I will again argue that self-conscious emotions play a particularly important role in the interpretation of doctrine from the perspective of emotions.

First, I suggest that the capacity for emotions should be an important part of any theory of human distinctiveness. As I have already claimed, it is easier to find counterparts in other primates of the basic emotions; they can display emotions such as fear and disgust in ways that are similar to humans. Non-human primates either don't show self-conscious emotions at all, or do so in a much more limited way than humans. Self-conscious emotions that depend on a complex conceptualization of the self and of relationships are, I suggest, very largely a distinctively human achievement.

It may seem surprising to be giving a significant place to emotions in a theology of what it is to be human. Christian theology has generally emphasized the importance of rationality in human distinctiveness, and emotions (or at least the 'passions') have often been seen as undermining human rationality. However, that is only what has been assumed in a particular phase of Christian intellectual history (Dixon 2003). We are now returning to a broader view of human rationality that emphasizes how affect can actually enhance human rationality and adaptiveness, rather than undermining it. On this view the human heart provides a counterpart to the head in a way that expands the scope of human cognition rather than being in opposition to it (Watts and Dumbreck 2013). Coakley (2012) has recently added a theological voice to the growing chorus from philosophy and cognitive neuroscience saying that emotion is part of human rationality, not a threat to it. The story of Adam and Eve (Genesis 3), which is important in both the Jewish and Christian traditions, can be read in part as being about the role of self-conscious emotions in human life. In the Augustinian West, it is usually read as being about original sin, but there is not much support for that in the text (Barr 1992), nor in Eastern Christian or Jewish readings. The story seems to be describing in mythological form the emergence of a new capacity for conceptual distinctions, which is associated with the development of self-conscious emotions. It is often taken by theologians as making static, ontological points about human nature, or as making eschatological points about the promise of paradise. However, I suggest that it can be taken as providing, albeit in mythological form, a narrative about the emergence of distinctive features of humanity; it can then be brought into dialogue with scientific accounts of human evolution (Watts 2002).

Central to the story are points about the acquisition of the capacity for conceptual distinctions. The acquisition of knowledge of good and evil is referred to in the story explicitly, and there is also an implicit account of the acquisition of a sense of the separateness of God and humanity. The story also refers to a rich range of self-conscious emotions, which are connected with this conceptual development. There is jealousy of God, in the form of the desire to be like God that is implicit in the account of the temptations of Adam and Eve. There is a new form of self-conscious embarrassment at nakedness that leads Adam and Eve to cover themselves. There is guilt about the eating of the apple that leads them to hide from God. Indeed, the story can be taken as a myth about the emergence of self-conscious emotions in humanity. I submit that the capacity for self-conscious emotions should be an important strand in a theological account of human distinctiveness.

Is this development of self-conscious emotions good or bad? I suggest that it is ambiguous. If the Genesis 3 story is taken as being about a 'fall', as Christians tend to do in the post-Augustinian West, then it is at least in part a fall upwards, and is about new capacities. Theologians have often claimed that relationality is a key factor in human distinctiveness (e.g. Turner 2008), but it needs to be noted that the human capacity for self-conscious emotions is a key aspect of human relationality. Self-conscious emotions serve the purposes of relationality, both with other people and with God. In that sense, the acquisition of self-conscious emotions is a fall upwards into a more advanced kind of relationality.

There are at least two senses in which the fall into self-conscious emotions could be taken as a fall into sin. It is arguable that, for an act to be properly regarded as sin, it needs to be carried out by a creature who is sufficiently self-aware to realize that they are transgressing, and to be capable of guilt. Without that capacity, creatures may do harmful things, but those acts cannot properly be regarded as sinful. In that sense, it is probably only humans who can sin. The other sense in which selfconscious emotions can lead into sin arises from the fact that they can be both helpful and unhelpful in their effects. Though they can certainly be helpful in repairing relationships and underpinning morality, they can also lead to an unhelpful self-preoccupation and sense of inner conflict in which people can become trapped. In as far as that deflects them from God's purposes, it might be seen as a form of sin. Another interesting feature of the story is how Adam and Eve are caught between a sense of their limitations and their overweening aspiration is in wanting knowledge of good and evil. They seem to have a fantasy that, with that knowledge, they would become like God. Perhaps that fantasy is partly fulfilled, but it comes with a sense that what has been achieved falls far short of what had been hoped for, and that innocence has been lost. This is an aspect of the story that features prominently in the Jungian reading of it by Edinger (1972), who sees the eating of the apple as an act of 'inflation' which ends the sense of undifferentiated psychic wholeness and leads to a sense of the gulf between the conscious self and the potential whole self. This brings out the important fact that the self-conscious emotions often arise around the polarity between aspiration and disappointment. The gulf between the two is probably central to the experience of being human, and the self-conscious emotions are embedded in that on-going pattern. This leads to a much more dynamic theological anthropology than the classic one framed in terms of human rationality.

I will now briefly point to another way of exploring the theological significance of self-conscious emotions, because they also provide a vantage point from which to approach other theological topics. For example, Kazen (2011) has explored the significance of a set of moral emotions, disgust, empathy, fear and a sense of justice, for understanding the Biblical law of the Hebrew Bible.

Moral emotions are also relevant to soteriology. Most theories of the atonement involve release from a sense of unworthiness. However, as Pruyser (1991) pointed out, different theories focus on different aspects of the sense of unworthiness. He discusses three theories of atonement. Two of them, as he suggests, seem to relate straightforwardly to guilt and shame. Satisfaction theories, as developed by Anselm, focus on how God can release humans from the burden of guilt, while still maintaining justice. The moral theory, as developed by Abelard, focuses on the sense of shame arising from the contrast between the moral ideal of Jesus on the cross and the inadequate response that many humans feel they are able to make.

I find Pruyser less convincing in relating ransom theories, as found for example in Origen, to release from the anxiety arising from the sense of being in bondage to dark cosmic powers. For one thing, it seems that *Christus Victor* theories might connect better with that sense of release. Also, I am not sure that 'anxiety' quite captures the emotion that is induced by the sense of being in bondage. They seem rather to connect with, and promise release from, a sense of fragmentation in the sense of self. That takes us outside the self-conscious emotions as they are usually formulated to a sense of distress arising from a lack of sense of core identity.

In Romans 7, St Paul describes a related sense of distress arising from a fragmented self-representation. He describes a pre-Christian state of being buffeted between law and lower nature, without a sufficiently strong sense of self to have a coherent sense of self-identity. This is somewhat parallel to the Freudian concept of the ego being buffeted between id and super-ego (Rubenstein 1972). However, it is possible for the self to be buttressed by an identification with Christ, which is able to provide an adequate sense of identity, and to keep the battle between law and lower nature at bay. Guilt plays a crucial role in this battle, as Romans 7 depicts it. St Paul argues that, without law, there is no transgression and no sense of guilt. The sense of guilt is thus a contingent state of affairs. Though it is made possible by the distinctive human capacity for self-conscious emotions, it also depends on the cultural framework of law. However, even then it is not inevitable, and St Paul seems to have experienced freedom from it through his experience of salvation in Christ.

Conclusion

The psychology of religion has so far played less attention to emotions than might have been expected. I suggest that it is relatively unimportant whether or not there are distinctive religious emotions, and more relevant to examine the role that emotions play in religious life. Though an examination of their role should be as comprehensive as possible, I have suggested here that self-conscious emotions will prove to be particularly important in religion. They are more cognitively complex, more distinctively human, and more embedded in culture than basic emotions. I have also claimed that emotions provide a perspective from which to develop a psychological hermeneutic of doctrine and that, once again, self-conscious emotions play a particularly important role. In this paper, I have taken three brief examples, the theology of human distinctiveness, the interpretation of Genesis 3, and theories of the atonement. However, I suggest that these are just examples of a potentially broader psychological interpretation of doctrine based on an examination of human emotions.

Bibliography

- Barr, J. (1992). The Garden of Eden and the hope of immortality. London: SCM Press.
- Batson, C. D., Schoenrade, P., & Ventis, L. (1993). *Religion and the individual*. New York: Oxford University Press.
- Bourrat, P., Atkinson, Q. D., & Dunbar, R. I. M. (2011). Supernatural punishment and individual social compliance across cultures. *Religion, Brain and Behavior*, 1, 119–134.
- Coakley, S. (2012). Faith, rationality and the passions. Chichester: Wiley-Blackwell.
- Corrigan, J. (2008). *The Oxford handbook of religion and emotion*. Oxford: Oxford University Press.
- Darwin, C., Ekman, P., & Prodger, P. (1998). The expression of the emotions in man and animals (3rd ed.). London: Harper Collins. Originally published 1872.
- Dixon, T. (2003). From passions to emotions. Cambridge: Cambridge University Press.
- Dunbar, R. (2014). Human evolution. London: Pelican Books.
- Edinger, E. F. (1972). Ego and archtype. Harmondsworth: Penguin.
- Ekman, P. (1972). Are there basic emotions? Psychological Review, 99, 550-553.
- Ekman, P. (1999). Basic emotions. In T. Dalgleish & M. Power (Eds.), Handbook of cognition and emotion (pp. 45–50). Chichester: Wiley.
- Francis, L. J., Croft, J., & Pyke, A. (2012). Religious diversity, empathy, and God images: Perspectives from the psychology of religion shaping a study among adolescents in the UK. *Journal of Beliefs and Values*, 33, 293–307.

- Granqvist, P. (2010). Religion as attachment: The Godin award lecture. Archive for the Psychology of Religion, 32, 5–24.
- Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), Handbook of affective sciences (pp. 852–870). Oxford: Oxford University Press.
- Kazen, T. (2011). *Emotions in biblical law: A cognitive science approach*. Sheffield: Sheffield Phoenix Press.
- Keltner, D. (1995). Signs of appeasement: Evidence for the distinct displays of embarrassment, amusement, and shame'. *Journal of Personality and Social Psychology*, 68, 441–454.
- Lasch, C. (1979). *The culture of narcissism: American life in an age of diminishing expectations*. New York: W. W. Norton.
- Lewis, M. (2014). The rise of consciousness and the development of emotional life. New York: Guilford Press.
- Luyten, P., Corveleyn, J., & Fontaine, R. J. (1998). The relationship between religiosity and mental health: Distinguishing between shame and guilt'. *Mental Health, Religion and Culture, 1*, 165–184.
- Oatley, K., & Johnson-Laird, P. N. (1987). Towards a cognitive theory of emotions. *Cognition and Emotion*, 1, 29–50.
- Plutchik, R., & Conte, H. R. (Eds.). (1997). Circumplex models of personality and emotions. Washington, DC: American Psychological Association.
- Pruyser, P. (1991). Anxiety, shame and guilt in the atonement. In H. N. Maloney & B. Spilka (Eds.), *Religion in psychodynamic perspective: The contributions of Paul W. Pruyser* (pp. 99–116). New York: Oxford University Press.
- Roberts, R. C. (2007). *Spiritual emotions: A psychology of Christian virtues*. Grand Rapids: W. B. Eerdmans.
- Rubenstein, R. L. (1972). My brother Paul. New York: Harper & Row.
- Sturm, V. E., Ascher, E. A., Miller, L. B., & Levenson, R. W. (2008). Diminished self-conscious emotional responding in fronto-temporal lobar degeneration patients'. *Emotion*, 6, 861–869.
- Tracy, J. L., Robins, R. W., & Tangney, J. P. (Eds.). (2007). The self-conscious emotions: Theory and research. New York: Guilford Press.
- Turner, L. P. (2008). Theology, psychology and the plural self. Farnham: Ashgate.
- Watts, F. (2001). Shame, sin and guilt. In A. McFadyen & M. Sarot (Eds.), *Forgiveness and truth* (pp. 53–69). Edinburgh: T. & T. Clark.
- Watts, F. (2002). Theology and psychology. Basingstoke: Ashgate.
- Watts, F. (2010). Psychology and theology. In P. Harrison (Ed.), Cambridge companion to science and religion (pp. 190–206). Cambridge: Cambridge University Press.
- Watts, F. (2014). Religion and the emergence of differentiated cognition. In F. Watts & L. Turner (Eds.), *Evolution, religion and cognitive science: Critical and constructive essays* (pp. 109– 131). Oxford: Oxford University Press.
- Watts, F., & Dumbreck, G. (Eds.). (2013). Head and heart: Perspectives from religion and psychology. Philadelphia: John Templeton Press.
- Watts, F., Nye, R., & Savage, S. (2002). Psychology for Christian ministry. London: Routledge.

Williams, R. J., & Watts, F. (2014). Attributions in a spiritual healing context; an archival analysis of a 1920s healing movement'. *Journal for the Scientific Study of Religion*, 53, 90–108.

Wright, D. (1971). The psychology of moral behaviour. Harmondsworth: Penguin.

Fraser Watts is Emeritus Reader in Theology and Science in the University of Cambridge, where he was also Director of the Psychology and Religion Research Group, and a Fellow of Queens' College. He is a former President of the British Psychological Society and of the International Society for Science and Religion. He continues to work on the psychology of religion and the interface between theology and science, and he is currently Director of the Cambridge Institute for Applied Psychology (edited with G. Dumbreck; John Templeton Press, 2013), and *Evolution, Religion and Cognitive Science: Critical and Constructive Essays* (edited with Leon Turner; Oxford University Press, 2014).

Chapter 16 The Scientific Approach to Emotions: Its Relevance for the Cognitive Study of Religion and for Theology

Lluis Oviedo

Abstract The new wave of scientific studies of emotions deserves closer scrutiny from the point of view of a theology seriously engaged with science. The current discussions, and the progress which has taken place in this field of research, offer new opportunities for a better understanding of human nature and its specificity, and for assessing several aspects in the scientific study of religion and its theological applications. As a main result, this research provides a broad understanding on emotions far from more reductive initial assessments. This view supports a more elaborate view about human mind and behaviour. From such a basis, theology can get a more accurate view of human freedom, of our capacity for love, and of sinfulness, helping to overcome its own more simplistic anthropological positions. The theology of faith can be enriched, too, from a view that builds cognition and emotion into shared and complex schemas.

Keywords Emotions • Positive and negative • Cognition • Collective emotions • Faith • Freedom • Love • Sin • Human specificity

Introduction

A minimalist program for science-and-theology might consist of gathering inputs from scientific research in its many fields that could be relevant or challenging for theological reflection. From this perspective, science should provide updated reports on the research advancement that could be significant or critical for theological development. Theology, on her side, is called to evaluate the meaning and reach of the incoming issues, and to assess their value or impact regarding its own topics. Sometimes contact with science means a crisis in traditionally held views; on other occasions scientific inputs may provide inspiration and even novel ways to address

L. Oviedo (🖂)

Antonianum University, Rome, Italy e-mail: loviedo@antonianum.eu

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_16

traditional challenges in the academic area of theology. In a further step, theology should help scientists to get acquainted with what it would mean to introduce a transcendent dimension into world affairs, and how the theological gaze helps to understand better a world filled with mysteries and hard to explain completely.

As a first step the present paper assumes that program, and summarizes the current scientific research on emotions that would be useful for theology. It moves, in a second step, towards possible applications and impacts on two related fields: the scientific study of religion, and theological reflection. The explicit aim is to assess to what extent recent developments in the scientific study of religion and emotions might have an impact on theological hermeneutics, and even help to account better for traditional theological issues. The most involved sub-disciplines would be Christian anthropology and theology of faith. However, the translation effort – from scientific description into theological implication – could also help to outline longterm consequences often hidden behind the scientific effort. Indeed it is not the scientist's responsibility to look for such long term repercussions, but to explain better how reality – in its many dimensions – works.

The current study of emotions has seen a multidisciplinary boom, involving several research lines: cognitive, neurological and endocrinological, together with more humanistic and social approaches (Dolcos et al. 2014). It is apparent that this issue invites the engagement of both more scientific and more humanistic lines of study. The hermeneutic of emotions cannot be reduced to just describing their biological and neurological basis, but clearly involves more dimensions in human nature, and its cultural environment. The reality of emotions could not be known without resorting to historical and cultural ways to deal with them, including the language that serves to express them and to trigger them.

Since emotions are such a complex phenomenon, the task is not easy; and indeed the current discussions around a better way of understanding emotions reveal some significant contrasts. As in most cases regarding the theological reception of scientific development, the incoming body of knowledge is usually very pluralistic and even divided, inviting a description about the different positions and a critical assessment on the existing lines of research. This is clearly happening in the field of the scientific study of emotions, something that renders the expected reception less linear and straightforward. This very pluralistic panorama invites us to pay attention to many nuances and provides a broader field for application.

What Is New in the Scientific Study of Emotions?

In describing new developments in the study of emotions, a possible approach consists of setting out the current debates and the main questions arising in that field. A presentation built on distinctions should help to summarize better the issues at stake and their meanings, once many research and review papers have been collected and summarized.
One of the most important distinctions in the current study of emotions is the divide between the first order, natural/basic, and second order, constructed/learned, or higher order emotions (Izard 2009). This duality is fundamental but by no means does it reflect a real configuration of the mind. In broad strokes, first order emotions would be associated more with natural, evolutionary mechanisms, that assist mammalian species to process external stimuli in an automatic way and which help to produce the correct behaviour or response. 'Second' or 'higher order' emotions would be associated with cognitively processed and complex built sets of experiences, which again have a functionality in guiding responses and adjusting to reality in more complex settings, and are linked to mature stages of human life, in which decisions need to assume a less predictable course of action.

As a norm, first order emotions are more linked to unconscious and implicit processes; while the constructed second order emotions would be more consciously elaborated, often including forms of self-regulation or management. First order emotions would belong to an earlier evolutionary and ontogenetic stage, and second order ones to a later stage. In any case, many authors point today to the difficulty in isolating both orders of emotions. They look for more integrated schemas in which both dimensions appear as entangled: first order emotions provide a fundamental ground for further developments that then take into account secondary emotional reactions; these latter retro-influence primary or basic states. As an authority in this field claims: 'The addition of higher order cognition immediately transforms the first-order emotion into an emotion-cognition interaction or emotion schema' (Izard 2011: 373). As an extension of this issue, the continuity between natural, genetic constitution, and cultural or social features is assumed in most current approaches to the study of emotions. These traits evolve following a pattern of mutual enhancement, helped by language and other social means (Greenwood 2012). The concept of 'emergence' appears as more fitting to describe that process (Barrett 2006, 2013; Coan 2010; Clore and Ortony 2013; Lindquist 2013).

A second distinction overlaps with the first one: the classic division between emotion and cognition. For about two decades researchers have discussed which causes the other, or which one has priority: the cognitively mediated perception that elicits emotional reactions, or the immediately-felt emotion that conditions and biases perception and even judgment (Damasio 1999). Recent research has clearly established that emotions have an impact on so called 'higher level cognition': interpretation, reasoning, judgment and decision-making (Tuan Pham 2007; Blanchette and Richards 2010; Schwarz 2000; Angie et al. 2011). It is clear, too, that different forms of cognition determine and even regulate emotions, modulating them according to actual needs (Koole 2009). The reference to 'appraisal' introduces a view of emotionally charged perceptions, which bear on cognition too, pointing to a more holistic view of that interaction (Moors et al. 2013). More mature developments integrate both features of the mind, which involve neuronal circuits, organic means (the endocrinological system) and high order cognition, pointing to an indissoluble, complex system. The regulating functions of the conscious mind are the basis for therapeutic approaches to pathological or dysfunctional emotions.

A third distinction – another classic one – separates emotions into negative and positive kinds. Negative ones have been more frequently objects of research and taxonomy: fear, anxiety, sadness, anger, disgust, shame and guilt are the main items in this well-known catalogue. It seems easier to associate them with adaptive needs and functions. The positive ones – happiness, pleasure, enjoyment, interest, awe, love, trust - have been less focused-upon: perhaps they are harder to isolate, and their effects are difficult to observe. Indeed, the general tendency is to gather all the positive emotions in a big container: 'happiness'. Some efforts have been undertaken to disentangle them (Sauter 2010). In any case, such a state of things could reveal some deep biases concerning human nature within the field of emotion research, especially in therapeutic practice (Vaillant 2013). Here too, negative and positive emotions seem to be deeply entrenched and their functionality appears as complementary. The growing field called 'happiness studies' shows once more the complexity concerning this issue when applied to the very practical field of life satisfaction, human flourishing, or experiences described as 'fullness of life'. Indeed that field has for a long time established a distinction that – once more – follows similar lines to those in the first distinction: between basic, or primary, and higher order emotions. Happiness can be observed under this double standard as well: as immediate or spontaneous feelings of well-being, or as a steady and more conscious state of mind that reflects a long-term satisfaction with one's own life (Tatarkievicz 1976).

Another important distinction arises between individual and socially-relevant emotions. A growing body of research points to the social involvement and effect of emotional systems, which appear as clearly embedded in cultural forms. Language is an unavoidable factor involved in emotional processing (Greenwood 2012); emotions have a clear 'social functionality' (Niedenthal and Brauer 2012); they condition social movements (Jasper 2011); they work as 'moral amplifiers' (Horberg et al. 2011); and they are linked to empathy and social interaction (Bernhardt and Singer 2012). As in other research fields, the individual aspect of emotion appears as deeply embedded in its social links and mediations. The recent publication of a multi-authored book on Collective Emotions (von Scheve and Salmela 2014) witnesses to the growing interest on the study of emotions shared by groups and corporations. The contributors to this volume claim that emotions are often shared inside a group. Many perspectives help to assess the extent of such 'communality' better: groups often behave intentionally; they share common commitments; they are based on schemas of mutual respect; they are implied in empathy, social networks, forms of social appraisal ... Many shared emotions can be recognized, such as sense of guilt or others derived from group commitments. The critical point lies in the difficulty of separating the individual and the collective dimensions affecting emotion; they often appear as entrenched or, in a similar way, individual emotions arise as embedded in collective entities.

The general impression one gets in trying to summarize the literature and making it more adapted to theological minds, is that the recent scientific study of emotion often needs to move beyond purely 'scientific' views to make place for traditional and new 'humanistic' strategies. Often the reviewed studies reflect distinct anthropologies: from more reductive, biologically-infused and automatic, to more integral, culturally-constructed and emergent. When dealing with emotions it clearly appears that a too-reductive stance becomes unsatisfying, even from a scientific point of view, since it is unable to account for factors that cannot be left aside if a truly scientific understanding of human emotions is pursued. It can be stated that the scientific study of emotions opens up dimensions that transcend the most reductive focus, expanding the original model, which could be satisfied with just biological, genetic and neurological descriptions.

Other interesting issues have to be outlined: the study of emotions needs to operate so as to show useful distinctions with which to better understand complex processes, and at the same time such studies need to point to unifying models. In them the main distinctions become functional inside a whole or integrated schema of first and second order emotions: the emotional and the cognitive or rational: their negative and positive aspects; and their individual and social dimensions. All these appear as configuring an inclusive and well-engrained pattern.

A third remark is important: a more complete and integrative study on emotions cannot ignore their conscious dimension. As Lisa Barrett states: since emotions cannot be detached from conscious 'mental contents', the researcher has to do more with 'representations', and less with 'things' (Barrett et al. 2007). Consciousness returns at the hand of the scientific study of emotions, and with that an unavoidable dualism arises again, after many attempts to conceal it.

Before moving to the next section, and concluding this attempt at dealing with the current scientific research into human emotions, a brief consideration may be given to ongoing research. The state of things displayed in this new field of scientific enquiry so far offers more opportunities for theology, and especially for Christian anthropology, helping to update its own message. Indeed, what the rigorous study of emotions reveals is a very complex anthropology, in which several factors intervene and many dimensions are involved. From this point of view, the current research opens up a richer understanding of human nature that is far from the reductive versions that have for so long plagued scientific dealing with human nature. This move happens without leaving the naturalistic stance that characterizes scientific enterprise; or, in other words, this is not at all a kind of 'crypto-theological' development, but rather one that simply recognizes the vast implications that the study of emotions disclose, leading to a more realistic and accurate view into human nature.

Application to the Scientific Study of Religion

It is generally assumed that emotions play a big role in religious experience, and that religion is often built on a system that elicits emotions, using them in a functional way. In a different way, religion helps to tame or regulate them when necessary, as for example helping to cope with negative emotions (guilt, shame, anguish, fear...), or to moderate forms of euphoria, or excess of enthusiasm. In any case, describing such processes becomes a big challenge for the recent cognitive study of religion: how this system works, integrating religious cognition and experience with emotional expressions, beyond sheer ritual triggers (Whitehouse 2004).

Some proposals come to mind. The first one applies the distinction between first and second order emotions to the development of two fundamental or 'ideal types' in religious orientation. This 'double schema' clearly overlaps with the cognitive one that distinguishes more intuitive and more reflective processes (Oviedo 2015). It is plausible that first order emotions could go together with more intuitive forms of religion, and that second order emotions, the more elaborated ones, would correspond with reflective and controlled religious expressions. Probably the first order emotions elicit - or are the result of - 'more elementary' forms of religion, while higher order emotions could be linked with more reflective religious expressions. What have been called 'emotion schemas', or more complex interacting emotional sets, have probably accompanied the evolution of religious faith based on divine revelation, and religious forms more entangled with social-cultural factors. These latter should entail systems of meaning and therefore a mental elaboration of relevant information, intermingled with emotional signals, both positive and negative. This could be the pattern arising with most 'post-Axial' religions, in which the experience of faith is bound to moral commitment and to a literary culture of much higher sophistication. Emotions might be discovered in various forms and expressions, at different levels of religious experience and its transmission, always as a part of a complex whole, where negative and positive versions of them assist in a much elaborated process. Then, how different post-Axial religions deal with emotions discloses a very pluralistic panorama, in which the analyst might find expressions built on a conscious use of emotional appraisal, like in many Christian confessions; or, on the contrary, might find religions attempting to silence the extent of emotional weight, as in the main versions of Buddhism.

Something similar could be suggested regarding the distinction between positive and negative emotions, in the sense that they could entail two specific religious expressions: again positive and negative, following a well-known typology. Religions can stress one direction or the other or, as Rudolf Otto pointed out a long time ago in his phenomenological approach, religions need to account for both dimensions: fear and fascination, or joy. Religion would result from an elaborate mixing or 'schema' combining fear and joy, something rather 'multidimensional' and always revealing a complex and rich structure in religious experience. In any case, the intended distinction between more elementary and more developed religious forms, together with their respective emotional expressions or configurations, is probably far from any real, historical expressions. An integrated model would be more useful and realistic: basic, first order emotions, like 'basic religious forms', are at the core of higher religious expressions, and can hardly be extricated from them. The schema reveals functionalities and uses of both forms, as in evolutionary processes in which higher species do not discharge elementary functions, but rather re-use them or proceed through forms of 'exaptation'.

Another interesting feature in the interface between the scientific study of emotions and religion is the possible causal links and 'pathways' that could be built in trying to account for that complex reality. Cappellen, Saroglou and colleagues have found evidence in their experimental approach that some positive emotions linked to self-transcendent moods trigger 'spiritual experiences'. This pathway is presented as an alternative to explaining religion as a kind of 'emotions management agency' (Cappellen et al. 2013). Such perception justifies a less functional view regarding religion and spirituality, and a more substantial experience of a selftranscending meaning's source linked to positive emotions. Similar concerns can be detected in other authors, as the following sentence reveals: 'Specific religions, for all their limitations, are often the portal through which positive emotions are brought into conscious attention' (Vaillant 2013: 590). Vaillant's point is that what is called 'spirituality' represents a set of positive emotions that are combined to provide meaning and connection, something very relevant in psychotherapeutic approaches as well.

The dynamics presiding over the interplay between religion and emotions are far from being settled. Some authors point to the regulatory function played by religion regarding certain emotions (Emmons 2005). However, others describe a more basic link between some emotions - e.g. wonder, awe - and religious experience, in the sense of helping to expand the mind and to transcend boundaries, thereby becoming crucial factors in mental development (Fuller 2006). Therefore, religious cognition and behaviour becomes less the result of external stimuli, or an epiphenomenon from other cognitive features, and more the expression of the internally-guided human need for meaning or certainty, the quest for transcendence, hope beyond death, universal harmony, internal peace, forgiveness before intense guilt, and the quest for greater love. As a consequence, the study of emotions applied to religion provides a more fitting picture about religious experience in its complexity and more respectful of its own perceived nature. One among the most urgent needs of the so called 'cognitive science of religion' is to make place for this pluri-dimensional instance, helping to overcome too simplistic and reductive representations on religious cognition and behaviour, which are unable to account for this set of factors deeply entrenched in an embodied and embedded human cognition.

Moving to Theology

Theological reflection needs to pay attention to both: the broad field of the scientific study of emotions, and the more specific aspects of its application to the study of religion. The possible impact of current research would be felt mostly in two specific areas: Christian anthropology and theology of faith. Since emotions are a human experience, their anthropological relevance is quite obvious. Then, emotions are very involved in various forms of religious experience, and hence faith is clearly concerned. Nevertheless, the pressing question is whether the recent developments, just reviewed, challenge or enrich Christian reflection, and to which extent. Some features come to mind: the specificity of humans, which is related to the traditional doctrine describing humans as being created in the 'image of God'; issues regarding human excellence, like freedom and love; and issues linked to the negative

dimensions affecting human existence, or its sinfulness. Besides this, the study of emotions poses some questions regarding the nature of Christian faith.

The first point to be emphasized is that the current scientific study of emotions does not close the door to specific features of the human mind and behaviour, but rather offers new arguments for human uniqueness or specificity. Even if emotions are not specific to humans, and we share many of them with other warm blooded mammals and even birds, the picture would be incomplete if the view were restricted to sheer evolutionary and biological mechanisms underlying human emotions. The human mind has its own way of processing and 'constructing' emotions. As has been shown, these human experiences are embedded in their social and cultural environment; they are transmitted from one person to another, and they are the object of elaborated forms of communication, resorting to an articulated language; they are transformed in the process of social exchange; and they are regulated or modulated when necessary by developed mental devices. Birds and non-human mammals are very far from these developments. The study of human emotions could trace their ethological roots in mammals and, still more, in some primates species, but in them hardly any resemblance would arise regarding the much more elaborate way in which emotions are felt and transmitted in humans. Continuity and discontinuity with other animals are characteristic of human emotions, and hence their study reveals human-specific traits, which cannot be simply reduced to other biological precedents.

Derived aspects of what can be called 'human excellence' also need to be accounted for. These include freedom and love. The contemporary study of emotions clearly adds some nuances to these issues, which cannot any longer be conceived of as disentangled from emotional features. However, this does not mean that, assuming emotional complex traits, we have to trim down our expectations about free will and love as virtues. Several studies point to the active role played by human subjects in dealing with emotions. A recent paper provides 'empirical and theoretical rationale for considering the person as a major contributor to emotion generation and development', besides evolutionary process and social pressure (Walle et al. 2012). Other studies point to 'emotions moral valence', which assume the form of 'self-evaluative' features, like in the case of shame and guilt, and show their central role in moral behaviour (Sheikh and Janoff-Bulma 2010). In other cases, the stress falls on the regulatory capacities that humans display in order to moderate negative and to enhance positive emotions; often this system is linked to religious beliefs and practices (Carr 2005; Thagard 2005).

The scientific literature reviewed provides evidence regarding the importance of the interplay between emotions and love, but by no means does the available data point to a demise of love as a virtuous attitude. Again, if that interplay is assumed, then the most evolved love forms are not just the mechanical consequences of primary emotional drives – which in any case are deeply embedded in human desires and behaviours – but helpers and hindrances to virtuous love, which has to deal with these variables, but is not necessarily enslaved by them. The realistic view invites us to avoid the extremes between assuming love as a pure form of the human will, quite undisturbed by embodied influences, and reducing love to an impersonal expression

of biological drives, exempt from voluntary control. Since emotions are elaborated many times at a higher level in humans, then the reductive focus on their primary features risks missing the point about the true dynamics of human love.

Other theological consequences derive from greater knowledge about emotions and their active role in religious life, a path which has already been explored. Douglas Davies, for instance, has been very committed to assuming emotions as a central factor in spiritual experience, contributing to building religious identity and meaning (Davies 2011). Several aspects arise in his detailed study, such as the role played by rituals in enhancing social values through emotional engagement. Ritual activity indeed selects and intensifies the available repertoire of emotions in order to serve in-group social functions and to build individual identity. These suggestions lead, a step further, to introducing the concept of 'identity depletion', a term that applies to the negative aspects lived by the self, and claiming religious salvation as an answer.

Emotions, in Davies' description, are bound to and sustain core values inside broad religious systems. A series of such values is proposed: 'love, mercy, humility, and betrayal'. Positive and negative dimensions configure an almost dual emotional code, within which the religious system is situated. Davies points to a 'personal religious career' in which these plural aspects become integrated to form one's own religious identity. The schema repeatedly described in that essay links emotions, values, and religious identity inside a social context, and this process is often enhanced by rituals that intensify perceptions and provide a framework in order to project meaning into lived emotions. The theological relevance of such a development is clear: ideas like 'grace' and 'salvation' might be updated, resorting to this rich conceptual repertory. As a consequence, a theology too intellectual, spiritual, disembodied and individualistic becomes untenable in this new context.

Human sinfulness is another central tenet in Christian anthropology. Research on emotions helps to highlight ways in which several basic negative emotions emerge that are strongly associated with this traditional insight. Medieval theological reflection has discussed whether human sinfulness was more or less associated with the presence of such negative passions – often gathered under the name of 'concupiscence' – or to our limits and difficulties in managing or regulating sets of emotions that could have an ambivalent worth, or which could be functional or dysfunctional, depending on our ability to deal with them or to find the right balance. This point could receive a much better treatment if one incorporated what has been learned from studies on emotional regulation. However, some voices suspect that modern and contemporary approaches to emotions often mean a step backwards regarding the accuracy and nuances described by classic and medieval Christian theologians working on emotions (Dixon 2012).

Davies' work quoted above provided the idea of 'identity depletion', affecting the perception of a self unable to reach a balance between the dual interplay of positive and negative emotions. This could be an updated way to express similar ideas to those present in theological moral reflection. The question is whether the new study of emotions might contribute to a better understanding of the dynamics of evil, negativity, or, put in different terms, the limits experienced by humans in dealing in the best way with their own life and their relationships. Some developments could become useful in this field of anthropological research. Since emotions configure systems or 'schemas' integrating basic and higher order expressions, with more or less elaboration, and multifaceted forms of socio-cultural mediation, sinfulness could preferably be placed at the level of such complex 'schemas' and not limited to single aspects or decisions.

Since theology has struggled in recent times to update the old-fashioned doctrine about original sin and its universal extent, perhaps the new study of emotions could offer some interesting clues. Entrenched schemas of emotions often appear too dependent on socio-cultural mediations, and are assumed in unconscious or conscious ways, so that humans hardly manage to find the right way to get rid of negative emotions, like hate, envy or selfish pride, which reflect very widely shared emotional structures. Salvation then becomes more linked to a sort of empowerment that faith and grace provide, in order to align in the right way such complicated and biased schemas, and to assist in a better elaboration or regulation of such entrenched sets of emotions.

The theology of faith can surely benefit from the research body reviewed here, to show how beliefs are formed inside a complex network covering cognitive and emotional processes embedded in cultural contexts and mediated by symbols and language. The expectation is that this rich corpus can generate new theological developments in this field, something which suggests a rather wider research program that can at present be glimpsed. What is now urgent is to integrate an updated version of Christian faith with the achievements of research in recent years in the cognitive and biological study of religion, after a critical appraisal. This step should accommodate the recent study of emotions and how they might mediate the acquisition, conservation, development and abandonment of religious ideas, conversion and de-conversion process, and how such drives affect a more complex, dual pattern of religious cognition, in which the intuitive and the reflective dimensions can be productively distinguished, and where biases and heuristics play an unavoidable role. Theology reflecting on faith is more about grace and divine revelation assisting the human longing for transcendence and salvation, and less about cognitive, neurological and emotional mechanisms underlying such deep experience. Nevertheless, a more comprehensive theology of faith should account for these aspects, which are not just secondary, but which mediate the entire process and help to explain how faith succeeds or fails, alongside mysterious divine plans.

Bibliography

Angie, A. D., Connelly, S., Waples, E. P., & Kligyte, V. (2011). The influence of discrete emotions on judgement and decision-making: A meta-analytic review. *Cognition and Emotion*, 25(8), 1393–1422.

Barrett, L. F. (2006). Emotions as natural kinds? Perspectives on Psychological Science, 1, 28-58.

Barrett, L. F. (2013). Psychological construction: The Darwinian approach to the science of emotion. *Emotion Review*, 5(4), 379–389.

- Bernhardt, B. C., & Singer, T. (2012). The neural basis of empathy. *Annual Review of Neuroscience*, 35, 1–23.
- Blanchette, I., & Richards, A. (2010). The influence of affect on higher level cognition: A review of research on interpretation, judgement, decision making and reasoning. *Cognition and Emotion*, 24(4), 561–595.
- Cappellen, P., Van, V., Saroglou, C., Iweins, M. P., & Fredrickson, B. L. (2013). Self-transcendent positive emotions increase spirituality through basic world assumptions. *Cognition and Emotion*, 27(8), 1378–1394.
- Carr, D. (2005). On feeling and emotion in religious experience and understanding. Journal of Beliefs & Values, 26(1), 39–53.
- Clore, G. L., & Ortony, A. (2013). Psychological construction in the OCC model of emotion. *Emotion Review*, 5(4), 335–343.
- Coan, J. A. (2010). Emergent ghosts of the emotion machine. *Emotion Review*, 2(3), 274–285.
- Damasio, A. (1999). The feeling of what happens: Body and emotion in the making of consciousness. New York: Harcourt.
- Davies, D. J. (2011). Emotion, identity, and religion: Hope, reciprocity, and otherness. Oxford/ New York: Oxford University Press.
- Dixon, T. (2012). "Emotion": The history of a keyword in crisis. Emotion Review, 4(4), 338-344.
- Dolcos, F., Wang, L., & Mather, M. (2014, November 11). Current research and emerging directions in emotion-cognition interactions. *Frontiers in Integrative Neuroscience*. doi:10.3389/ fnint.2014.00083.
- Emmons, R. A. (2005). Emotion and religion. In R. F. Paloutzian & C. L. Park (Eds.), *The hand-book of the psychology of religion* (pp. 235–252). New York: Guilford.
- Fuller, R. (2006). Wonder and the religious sensibility: A study in religion and emotion. *Journal of Religion*, 86, 364–384.
- Greenwood, J. (2012). Wide externalism and the roles of biology and culture in human emotional development. *Emotion Review*, *4*, 423–431.
- Horberg, E. J., Oveis, C., & Keltner, D. (2011). Emotions as moral amplifiers: An appraisal tendency approach to the influences of distinct emotions upon moral judgment. *Emotion Review*, 3(3), 237–244.
- Izard, C. E. (2009). Emotion theory and research: Highlights, unanswered questions, and emerging issues. Annual Review of Psychology, 60, 1–25.
- Izard, C. E. (2011). Cognition interactions Forms and functions of emotions: Matters of emotion. *Emotion Review*, 3(4), 371–378.
- Jasper, J. M. (2011). Emotions and social movements: Twenty years of theory and research. Annual Review of Sociology, 37, 285–303.
- Koole, S. L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and Emotion*, 23(1), 4–41.
- Lindquist, K. A. (2013). Emotions emerge from more basic psychological ingredients: A modern psychological constructionist model. *Emotion Review*, 5(4), 356–368.
- Moors, A., Ellsworth, P. C., Scherer, K. R., & Frijda, N. H. (2013). Appraisal theories of emotion: State of the art and future development. *Emotion Review*, 5(2), 119–124.
- Niedenthal, P. M., & Brauer, M. (2012). Social functionality of human emotion. Annual Review of Psychology, 63, 259–285.
- Oviedo, L. (2015). Religious cognition as a dual-process: Developing the model. *Method and Theory in the Study of Religion*, 27(1), 31–58. doi:10.1163/15700682-12341288.
- Sauter, D. (2010). More than happy: The need to disentangle positive emotions. Current Directions in Psychological Science, 19(1), 36–40.
- Schwarz, N. (2000). Emotion, cognition, and decision making. *Cognition and Emotion*, 14(4), 433–440.
- Sheikh, S., & Janoff-Bulma, R. (2010). Tracing the self-regulatory bases of moral emotions. *Emotion Review*, 2(4), 386–396.
- Tatarkievicz, W. (1976). Analysis of happiness. Warsaw: Martinus Nijhoff.

- Thagard, P. (2005). The emotional coherence of religion. *Journal of Cognition and Culture*, 5(1/2), 59–74.
- Tuan Pham, M. (2007). Emotion and rationality: A critical review and interpretation of empirical evidence. *Review of General Psychology*, 11(2), 155–178.
- Vaillant, G. (2013). Psychiatry, religion, positive emotions and spirituality. Asian Journal of Psychiatry, 6, 590–594.
- von Scheve, C., & Salmela, M. (Eds.). (2014). *Collective emotions*. Oxford/New York: Oxford University Press.
- Walle, E. A., Dahl, A., & Campos, J. J. (2012). How can one piece together emotion when a crucial piece is missing? *Emotion Review*, 4(3), 299–300.
- Whitehouse, H. (2004). *Modes of religiosity: A cognitive theory of religious transmission*. Walnut Creek: AltaMira Press.

Lluis Oviedo is full professor of Christian anthropology in the Theology Faculty, Antonianum University, Rome. He has published many articles of interdisciplinary orientation in the interface between religious faith, culture and science. In recent years he has engaged in empirical research in the field of cognitive science of religion, and is deepening a constructive dialogue between this area of study and theology.

Chapter 17 Spiritual Knowledge as Embodied Appraisals: A Reading of Jonathan Edwards from an Emotion Theory Point of View

Mikael Sörhuus

Abstract The role of emotions and religious experience is a prominent theme in the theology of Jonathan Edwards (1703–1758). His concept of 'the sense of the heart' involves a synthesis of emotion, perception, intellect and dispositions for moral action. Due to the vague distinctions and relations between these components, an apparently internal tension has been the focus of several interpretations. In this paper I argue that we ought to reexamine Edwards's position through contemporary emotion theory. By doing this, much of the internal tension of the sense of the heart can be decreased. The theory used in this paper is Jesse Prinz's modern version of the James-Lange theory, in which emotions are embodied appraisals. Emotions are perceptive in a double way: as feelings of bodily changes and trackers of relations between an organism and an organism-significant environment. There is no necessary conflict between value-content, bodily feelings, cognitions and action-enablers in the emotional process. In the light of this, it is reasonable to conceptualize the sense of the heart as a primarily emotional faculty. Heart, head and body need not exclude each other.

Keywords Conversion • Jonathan Edwards • Embodied appraisal theory • Emotion • Epistemology • Feeling • The Great Awakening • The James–Lange theory • Alvin Plantinga • Jesse Prinz • Religious experience • Spiritual knowledge • William Wainwright

M. Sörhuus (🖂)

© Springer International Publishing Switzerland 2016

Department of Theology, Uppsala University, Uppsala, Sweden e-mail: mikael.sorhuus@teol.uu.se

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_17

Jonathan Edwards: The Sense of the Heart – Affect or Intellect?

Jonathan Edwards was one of the dominant voices of the early Great Awakening in the eighteenth century and the perhaps most important American theologian of all time. His work stands in opposition to the traditional and intellectual Christianity of his time, exploring a more emotional spiritual life. It is both a criticism of, and an act of balance between, cool rationality and a practice under the influence of mere affect. His epistemological view on the role of emotions in religion has been debated since the posthumous publishing of his central Miscellany 782 in 1948.¹ One of the debate's aspects has been the tensions between emotion, intellect and perception in Edwards's writings on *the sense of the heart*. The purpose of this paper is to demonstrate how these tensions can be significantly decreased by conceptualizing the theory of Edwards through contemporary emotion theory.

For Edwards, spiritual knowledge is experiential knowledge. It is the experience of God and of the values of spiritual life that is the foundation of his religious epistemology. This experience is possible due to certain epistemic faculties within man; most notably via something he calls a 'sense of the heart' (Edwards 2000: 452 [Misc. 782]), or sometimes a 'new sense' or a 'spiritual sense' (Edwards 1959: 206). The significance of the sense in Edwards's theology has been widely acknowledged since Perry Miller's article 'Jonathan Edwards on the Sense of the Heart' (Miller 1948: 129–145). Through the sense of the heart the unconverted, the 'natural man' (Edwards 1959: 100-102), acquires what Edwards describes as a 'new simple idea' (Edwards 1959: 205), the content of which is described as the 'beauty and sweetness of holiness' (Edwards 1959: 260), 'the excellency of divine things' (Edwards 2000: 465 [Misc. 782]), or, in Alvin Plantinga's summarizing words, 'God's moral qualities' (Plantinga 2000: 299). This idea is new, since it 'is in its whole nature different, yea exceeding different from all that is or can be in the mind of a natural man' (Edwards 1959: 208), and simple, since it 'could be produced by no exalting, varying or compounding of that kind of perceptions or sensations which the mind had before' (Edwards 1959: 205). This has epistemological, emotional, and action-related consequences. In the light of this idea reason is improved in both ratiocination as well as discrimination: '[the child of God] sees and understands something more of divine things than he did before' (Edwards 1959: 266), and 'it sanctifies the reasoning faculty, and assists it to see the clear evidence there is of the truth of religion in rational arguments' (Edwards 2000: 156 [Misc. 628]). A new emotional understanding arises: 'that sensation, and that kind of delight he [the saint] has in that view, (...) is peculiar, and entirely diverse from anything that a natural man has' (Edwards 1959: 208). It also affects the grounds of moral action: 'they who see the beauty there is in virtue, don't perceive it by

¹The first publication of this 'Miscellany' is found in Perry Miller's article 'Jonathan Edwards on the Sense of the Heart'. References here are to the publishing of the Miscellanies 501–832 by Yale University Press and marked with the number of the miscellany.

argumentation on its connections and consequences, but by (...) a certain spiritual sense' (Edwards 1989: 620). The spiritually enlightened, the *regenerated*, have a different view on the world. This has brought discussion as to how this process should be understood epistemologically. How do intellect, emotion and perception relate to each other here? And, to what degree are they continuous with the faculties of natural men, the unregenerated?²

An important point seldom noticed is that the new or spiritual sense actually is a part of the wider *sense of the heart*, which generally makes them mistakenly conflated in literature on Edwards (James Hoopes and Michael McClymond are among the exceptions (Hoopes 1983: 857-858; McClymond 1997: 196, n. 3)). Where the latter is a general epistemological faculty, the former is specific due to its intentional object (and possibly also due to a mystical influence of God (Edwards 1999: 125; McClymond 1997: 209–211). The new or spiritual sense is somehow attained parallel to, or activated with, the new idea. '[It] is not a new faculty of will, but a foundation laid in the nature of soul' (Edwards 1959: 206). New premises are given to existent systems in the regenerated: they acquire a new spiritual add-on to their sense of hearts. Thus the spiritual sense is a partial set of the sense of the heart, which is why a discussion on the former implies a discussion on the latter. And since the latter to a significant degree occurs in writings on the former (the sermon A Divine And Supernatural Light is an example of this (Edwards 1999: 127)), the easiest route is to discuss both senses together. For the purpose of this paper they will be discussed together and explicitly distinguished when necessary.

If the sense of heart (and following, the spiritual sense) is contrasted with reason, it is with *pure* reason, that is, *speculation* – 'for it is not speculation *merely* that is concerned in this kind of [spiritual] understanding' (Edwards 1959: 272, my emphasis) – and not excluding it. Reason and emotion are in the sense of the heart intertwined on the edge of being inseparable. Sometimes he uses the term *will* to denote the affective principles of the sense of the heart (Edwards 1959: 96): 'nor can there be a clear distinction made between the two faculties of understanding and will, as acting distinctly and separately, in [spiritual understanding]' (Edwards 1959: 272).³ Both the emotional and the intellectual faculties are at work here but their relation has been debated. The main question is: how can emotion lay the foundation for – or even constitute – an understanding? I will use two examples of how this relation can be understood and why reason tends to get the main role: Alvin Plantinga's chapter on Edwards in *Warranted Christian Belief* (Plantinga 2000) and William Wainwright's *Reason and the Heart* (Wainwright 1995).

²The relation between the sense of the unconverted and the sense of the regenerated has been discussed by Michael McClymond in 'Spiritual Perception in Jonathan Edwards' (McClymond 1997). If the bridge between the two is held as short, then it is proper to talk about a *continuation*. This is basically Miller's position. If it is long or even incommensurable, it is a *discontinuation*. McClymond argues for a view that integrates both perspectives (McClymond 1997: 208–214).

³To be precise, the term *will* is used to denote the action-aspect of man's affections, while the term *heart* refers to its position in the mind (Edwards 1959: 96–97).

Alvin Plantinga has argued that Edwards's concept of the sense of the heart is primarily intellectual. If information is grasped via some genuine perceptive act, it must be the intellect that grasps it, since perception of external qualities implies intellect (this is for Lockeian reasons which I believe can be held separate from this analysis). For any affects excited there must be intellectual grounds for these (Plantinga 2000: 294-301). And since Edwards actually writes that 'Knowledge is the key that first opens the hard heart and enlarges the affections' (Edwards 1959: 266), this inference seems to be justified. It is called a sense of heart 'but appearances can be deceiving', as Plantinga puts it (Plantinga 2000: 298). On the other hand, William Wainwright has emphasized the emotional aspect of the process, since it gives the regenerated an overall and necessary evaluation of the evidence at hand. The regenerated understands more, his reasoning faculties are sanctified, and the evidence of religious truth becomes clearer (Edwards 1999: 128–130). Emotion sets the epistemological scene - what to evaluate - but it is reason that finishes the job (of justifying belief in God) (Wainwright 1995: 41–50). In the end, both Plantinga and Wainwright hold the resulting understanding to be intellectual, even though emotions may be either products or preliminaries of the process. The account I will present emphasizes the emotionality of the sense of the heart to a greater degree. I do not fully reject the positions of Plantinga (emotions are consequences of the intellectual aspects) or Wainwright (the emotional aspects are highlighters of evidence for the intellect), but I do argue that both are missing a significant aspect of the sense of the heart.

Finally, Edwards describes the sense in terms of sensation. The unregenerated is described as 'a man without the sense of tasting (...) without the sense of hearing (...) a man born blind' (Edwards 1959: 208), whereas the regenerated has 'a new spiritual sense (...) new kind of perception or spiritual sensation' (Edwards 1959: 205). When apprehending ideas pertaining to the sense of the heart it 'is by *immediate* sensation' (Edwards 1989: 619, my emphasis) – the keyword is passivity, a typical characteristic of perception. A point generally overlooked is that it also has an internal direction; it is a 'feeling of the heart of pleasedness or displeasedness' (Edwards 2000: 459 [Misc. 782], my emphasis). To my knowledge, Wainwright is the only one to observe this dual aspect. In other words, the sensations of the heart are both *perceptions* of *external* qualities and *feelings* of *internal* states. Here lies a problem: as a result of this subtle separation, interpretations have often been forced to choose between internal 'delight' and 'beauty'/'excellency' as the sense's object - generally missing the former or holding it as some kind of a byproduct. This is the case with Plantinga: the content of 'beauty' needs intellect as a vehicle. It is a *cognitive* ability that apprehends the quality of 'beauty' (Plantinga 2000: 299), and so the internal aspects are not mentioned in his interpretation. Thus, Plantinga holds that one 'first comes to this experiential knowledge, and then comes to develop the right loves and hates' (Plantinga 2000: 301). A middle way could be something like 'beauty'/'excellency' as a disposition to create 'delight', but this would make spiritual properties contingent on the regenerated, which seems unlikely (Wainwright 1995: 21). Wainwright seeks to integrate all three positions, but the question of mere delight's lack of intentional relation to the spiritual object remains (Wainwright 1995: 21–28). As I will argue in the following sections, these intentionalities can be identified as separate, while in an extended sense they share the same formal object. I will also argue that apprehensions of value-content need not imply cognitions at the expense of emotions and feelings.

Clearly, there are several tensions here. The sense of the heart supplies man with an understanding that is both affect and intellect. It implies reason but is neither synonymous nor exhausted by its principles. It includes sensations of both external values and internal feelings. If regenerated by conversion the sense is new by principle, but not by faculty. The lines between these components are soft or vague, which has led to discussion of how these tensions should be understood. Which is primary here – the head or the heart? Is it intellect, affect or perception? My contribution is to show how this tension can be decreased by applying Jesse Prinz's embodied appraisal theory of emotion.

Jesse Prinz: Emotions as Embodied Appraisals

Philosopher Jesse Prinz has argued for an emotion theory that holds emotions to be embodied appraisals (Prinz 2004). This signifies the meeting of two different traditions: the (somatic) feeling theory of William James and Carl G. Lange, and the (cognitive) appraisal theory of Richard Lazarus. Simply put, the James-Lange theory describes emotions as feelings, that is, perceptions of bodily changes.⁴ It is no coincidence that emotions are expressed and experienced in terms of physical feelings, be it butterflies in the stomach or aching hearts (See James 1884, 1890: 442-485; Lange 1885). In this sense, emotions are embodied. The counterintuitive aspect of this is of course the feeling theory's absence of intentional components what emotions are about – something stressed by cognitive theories of emotion. One example of such an account is the appraisal theory of Richard Lazarus. Lazarus holds that emotions signify core relational themes - that is, relations between an organism and an organism-significant environment, in short, relations that pertain to our well-being (Lazarus 1991a: 121-123, b: 353-356). Anger, for example, represents 'a demeaning offense against me and mine', and fear, 'facing an immediate, concrete, and overwhelming physical danger' (Lazarus 1991a: 122). Emotions are appraisals (Lazarus 2003: 99). Prinz brings these two traditions together: emotions are perceptions of bodily changes (the nominal content) and representations of core relational themes (the real content) (Prinz 2003: 79-80, 2004: 67-69, 2005: 12-15, 20-21). Following the theory of Fred Dretske, mental representations are defined as information-carrying, functionally designed, and applicable with a binary truth-value (Dretske 1988: 51-78). None of these are excluded by perceiving a physical state alone -a state Prinz describes as a *body* state prototype (Prinz 2004: 52-54). A sufficient number of bodily componential

⁴There have been some suggestions that James did not hold feelings to be identical with emotions, but this view has been criticized, I believe for good reasons (Prinz 2004: 5, n. 2).

changes – *diagnostic features* – make it proper to talk about such a state (Prinz 2004: 72–73). It is not the number of tears that count, but the sum of the body of sorrow. Emotions help us track values in our lives (for example 'offense'), and enable appropriate actions in response (for example 'getting ready for an attack') (Prinz 2004: 77–78, 228–229). Thus, in an indirect sense, emotions are perceptions of values (Prinz 2004: 229, 232) – they 'go beyond the body' (Hvorecký 2010: 219). (It should be noted that Prinz does not hold perceptions as necessarily *conscious* – emotions can be perceptions without having the phenomenological feeling-aspect. However, if an emotion *is* conscious, it is equivalent with its feeling (Prinz 2004: 201–205, 2005: 15–18). The emotions discussed in this paper are not unconscious, which is why this has no significant bearing on the following analysis.)

A prerequisite for this tracking are mental links between the object of the theme and the resulting emotion, something Prinz calls *calibration files*, some of which we are born with. This is important since they are preliminaries for a *basic* set of natural emotions (Prinz 2003: 84, 2004: 99-100). A blending of these basic emotions, or a refinement due to *new cognitive* information, results in new *non-basic* emotions (Prinz 2004: 91–93). An adult's emotional life is to a high degree recalibrated in this way, whereas an infant's is not. Our emotions are not static, but develop over time due to our evolving and experience of new values, that is, information of organismsignificance. It is not an uncommon thing to hold certain emotions as less complex (or more primitive) than others - even though the contents of these sets of uncompounded basic emotions may vary among theories of emotion. But variation here is in degree rather than complete difference – one should not exaggerate the discrepancy. In this case, principle goes before content: emotions can be simple or compounded. However, one has to be cautious here as to how these cognitions relate to the essence of these (cognitively recalibrated) non-basic emotions. New cognitive information can refine an emotion in a causal way without being essential components (Prinz 2003: 80-81, 84, 2004: 100-101). Since there may be several separate causes (either external or internal) for an emotion, they can only be moreor-less sufficient, but never necessary, elicitors (Prinz 2004: 49-51). This is what separates Prinz from cognitivist theories. Cognitivists get it right when they acknowledge cognitive acts as powerful internal elicitors, but these acts are not to be identified with the resulting, passive-perceptual response.

On Prinz's embodied appraisal theory, appraisals need not be disembodied and feelings need not lack representational content. In contrast to strict somatic accounts, emotions are held to be appraisals. In contrast to strict cognitivist accounts, emotions are information–carriers which are not necessarily cognitive – although they are generally cognitively calibrated in an adult's emotional life. Emotions are perceptions of the body and thus, in an indirect sense, perceptions of values. In combination with cognitive information and an increasing complexity of life, they develop and are calibrated in accordance with significant relations between the subject and its surroundings. As Prinz puts it: 'We are using our bodies to perceive our position in the world' (Prinz 2004: 240).

Appraisals

I argue that by conceptualizing the sense of the heart through embodied appraisal theory, a fruitful understanding of Edwards's account is possible. First off, two points are important. This is a useful method on a principle level, independent of the material used here. It is a demonstration of what Sarah Coakley has described as the 'alluring possibilities for future interchange between the disciplines' of emotion theory and philosophy of religion (Coakley 2012: 10). Secondly, there is a significant core, whatever its size, in the specific material used here, of both potency and plausibility.

First of all, the sense of heart has values or value-laden realities as its intentional object. (If there is a potential difference here, it is unimportant for now. The relation between the two has bearing on the idealistic aspects of Edwards's ontology.) In spiritual matters this object is the 'beauty' or 'excellency' of God or spiritual objects: in mundane matters it is 'beauty and deformity', or 'loveliness and hatefulness' and the like (Edwards 2000: 459 [Misc. 782]). I will use the category of spirituality as an example in this section since it is more extensive for the analysis, and also implies the category of the mundane sensing of the heart. The spiritual object is of definitive interest - 'eternal interest' (Edwards 2000: 462 [Misc. 782]) of natural man and man's goals, since it is the realization of the highest ontological, and soteriological, value. Hence it satisfies sufficient conditions for constituting a core relational theme - and of course, on a principal level this also applies to the mundane objects of man's interest. The emotion *delight* thus corresponds with a theme which could be framed as an apprehension of the highest ontological and soteriological value, or simply put, beauty. This is the appraisal content or the real content of the emotion. Its apprehension is passive, in Edwards's terms a sensation (of beauty), in Prinz's terms a perceptive tracking (of core relational themes).

As an emotion, delight also has an internal state. In Edwards's terms it is the sensation of being in a certain feeling state (most notably 'about the heart and vitals' (Edwards 1959: 96)): in Prinz's terms it is the perception of bodily changes. This is the embodied feeling aspect or the nominal content. Prinz can account for this double direction of the sensation Edwards describes: it is an indirect perception of external qualities and a direct perception of internal states. Emotions are by definition an experience of both. The extra step of an intentional object (the body) makes them distinguishable, even though they are unified in the emotional process and formal object. In this sense, it is not surprising that Edwards describes spiritual emotional sensation in an apparently ambivalent way, as both 'beauty'/'excellency' and as 'delight'. The role of embodiment in Edwards's theology is generally downplayed. On this interpretation a different route is suggested where the body is a representation of the spiritual in a much stronger sense than normally held. Hence, a new meaning can be given to Edwards's words on embodiment: '[bodily effects] are fit and suitable figures to represent the high degree of those spiritual affections, which the Spirit of God makes use of them to represent' (Edwards 1959: 135).

The regenerate's new or spiritual sense is also described as a new *foundation* or principle, but not a new faculty. It is the acquiring of a certain set of affections (McClymond and McDermott 2012: 316) which has the result of radically changing man's view on life on an *appraisal* level. This is intelligible by Prinz's description of the emergence of a new emotion in existing emotional systems: recalibration does not exchange the emotional faculties, but expands them. It is not a new system ('faculty') but an alteration of its components ('principle') – much like adding a crayon to a box of crayons rather than exchanging the whole box.⁵ A new emotion implies new possible blends of emotions and new possible appraisals of the world: it is not only the organism that changes but the environmental significance. Edwards's position is that the apprehension of spiritual beauty transforms man. For him, this beauty is that of absolute value for man. Hence, it is no coincidence that he holds the world of the regenerate to be a radically enlightened one. Steven R. Yarbrough and John C. Adams were close when they wrote that Edwards's saints 'lived in a different world altogether' (Adams and Yarbrough 1993: 13).

But the world of the regenerate is not only seen in a new evaluative light: man's inclination to *act* upon the world is changed - 'the personality is so transformed by new taste and desires that the redeemed can never return entirely to his old sinful ways' (Edwards 1959: 208, 1989: 620; Hoopes 1983: 862). A tight connection between emotion and action is an emotion theory standard. Prinz calls emotions action-enabling in accordance with their core relational themes. Hence, new emotions clear the way for new action-enablers due to the appraisals at hand and so expand the probability-spectrum of motivations. New emotions increase or decrease action tendencies in the agent. Note that this is not constricted solely to cases of action; rather it is an infusion of general tendencies that pertain to the emotion. Here, Edwards seems to hold a stronger account than Prinz, since he suggests that a complete reversal of long-term behavior is impossible. An understanding of the long-term effects on action tendencies or habitual behavior due to emotional recalibration requires a different kind of theoretical material than used here. Both Edwards and Prinz draw a line between emotion and action, which leaves room for agency - but in what type and to what degree I will leave open. However, it is not unthinkable that the strong habitual effects suggested by Hoopes above, and the stored action tendencies of Prinz, might correspond.⁶

Now some will argue that the affections (and following the basic principles of the sense of the heart) are not emotions but *inclinations* towards God, explicitly contrasted by Edwards with the 'passions' of the body (Choi 2010: 280–281, McClymond and McDermott 2012: 312–314). These accounts mistakenly hold

⁵For the analogy to be precise, the added crayon needs to be that of a base color. This actually mirrors the mystical aspect of Edwards's account: something wholly new *can* be added to the faculty. I do not believe that a conceptualization of this kind can avoid reduction of Edwards on this specific point.

⁶Just as Edwards's conversion is potentially corruptible by sin, emotional instinct may be stored. An extreme example would be emotional action tendencies induced by Post-traumatic Stress Disorder.

emotions to be devoid of perceptions of external values. That emotions do not, wholly or partially, consist in inclination I hope has already been shown to be untenable. On the emotion theory presented, emotions are intentional relations to an organism-significant environment that enable action. They are inclinations by definition. Even if one objects to the embodied appraisal theory, passions being emotions does not make affections non-emotional. Rather, both can be different partial sets of the wider set of emotions.⁷ It is basically a question of significance: some feelings signify more important values than others. Holy affections and passions are the extreme ends of the spectrum. This is Edwards drawing the line between the truly Awakened regenerate and his contemporaries, such as the Enthusiasts (Edwards 1959: 287).

Finally, Edwards describes reason and the heart as intertwined in the act of sensing the world. If either reason or the heart is excluded, it is no longer a sense of heart. Prinz holds that since form (body state) need not exclude appraisal or real content it is not necessary to add intellect as a vehicle for this appraisal content. There is no given conflict between embodiment and representational content. But it is not the case that reason does not have a role to play. There are two important cases of direct cognitive involvement, both of which apply to mature emotional organisms. First, emotions generally are recalibrated, both by cognitions and combinations of emotions. Cognitive information is a pre-requisite for recalibration of higher cognitive emotions in complex organisms. Second, acts of cognition are powerful internal causes for evaluation of proper emotional responses. Both of these are consistent with Edwards's claim that reason and the heart are intertwined in the act of sensing the world -if the subject is held to be an adult. Note that it is not intellect's sole role in the sense of the heart that is of significance here, but that of the emotions: an inclusion of cognition does not make an exclusion of emotion, and the other way around. This would mean that every emotion cannot be a part of the sense of the heart, and every part of the sense of the heart cannot be wholly emotional. If this conceptualization is correct, then it has the interesting implication that this should be the case with basic emotions: they are not part of the sense of the heart. This is to a large extent consistent with Edwards's discrimination between affections and passions. In face of a world that matters, heart, head and body cooperate. For Edwards, where the areas of emotion and reason meet - we can call this the 'Common Area' - it is called the sense of the heart. This interpretation does not exclude Plantinga's position: that this Common Area (sense of the heart) has effects on the Emotion Area (knowledge leads to affect). Nor does it exclude Wainwright's: that the Common Area has effects on the Reason Area (affect leads to improved knowledge). But it does say that the Emotion Area is more significant and more constitutive of the Common Area than reason. For now, this does not answer every problem, such as a wider discussion on how an act of speculation relates to cognitive

⁷The passions do differ from affections by some treats: (1) a shorter timespan – they are more 'sudden' (Edwards 1959: 98); and (2) as negative action enablers: the mind is 'more overpowered and less in its own command' (Edwards 1959: 98).

acts that induce emotional responses, and to what extent it would be proper to talk about a fusion or 'intertwinement' in such cases of causation.

Jonathan Edwards was no armchair theologian. His writings and sermons were deeply rooted in his practice as a preacher and an ambition to conceptualize the religious movement and practice of his time. Any view that detaches his theory from his practice is a view gone astray. He was unwilling to make a clear cut between head and heart, between intellect and affect, something that this analysis can account for. The emotional sense of the heart can contain content, feeling-sensations in a double way, new actions and new views on the world, all in one stroke. Unfortunately the unclear distinctions, in combination with a lack of tools, have led several interpretations to re-energize the Enlightenment dichotomies Edwards strived to transcend.⁸ Bringing together this eighteenth century theologian with a contemporary emotion theorist is one step in the right direction.

Bibliography

- Adams, J. C., & Yarbrough, S. R. (1993). Delightful conviction: Jonathan Edwards and the Rhetoric of Conversion. Westport: Greenwood.
- Choi, K. J. (2010). The role of perception in Jonathan Edwards's moral thought. Journal of Religious Ethics, 38(2), 269–296.
- Coakley, S. (Ed.). (2012). Faith, rationality, and the passions. Chichester: Blackwell Publishing Ltd.
- Dretske, F. (1988). Explaining behavior: Reasons in a world of causes. Cambridge: MIT Press.
- Edwards, J. (1959). A treatise concerning religious affections. In J. E. Smith (Ed.), *The works of Jonathan Edwards, volume 2: Religious affections*. New Haven: Yale University Press.
- Edwards, J. (1989). The nature of true virtue. In P. Ramsey (Ed.), *The works of Jonathan Edwards, volume 8: Ethical writings*. New Haven: Yale University Press.
- Edwards, J. (1999). A divine and supernatural light. In W. H. Kimnach, K. P. Minkema, & D. A. Sweeney (Eds.), *The sermons of Jonathan Edwards: A reader*. New Haven: Yale University Press.
- Edwards, J. (2000). Miscellany 628 and Miscellany 782. In A. Chamberlain (Ed.), *The works of Jonathan Edwards, volume 18: The 'Miscellanies'* (pp. 501–832). New Haven: Yale University Press.
- Hoopes, J. (1983). Jonathan Edwards's religious psychology. *Journal of American History*, 69, 849–865.
- Hvorecký, J. (2010). Embodied appraisals and non-emotional states. *Human Affairs*, 20(3), 215–223.
- James, W. (1884). What is an emotion? Mind, 9, 188-205.
- James, W. (1890). The principles of psychology (Vol. 2). New York: Dover.
- James, S. (1997). *Passion and action: The emotions in seventeenth-century philosophy*. Oxford: Oxford University Press.
- Lange, C. G. (1885). Om Sindsbevaegelser. Copenhagen: Jacob Lunds.
- Lazarus, R. (1991a). Emotion and adaptation. Oxford: Oxford University Press.
- Lazarus, R. (1991b). Cognition and motivation in emotion. American Psychologist, 46(4), 352-367.

⁸However, it should be noted that the dichotomy emotion/reason is more of a *result* of the Enlightenment than it was a *part* of it. See for example James 1997 and Losonsky 2001 on this.

- Lazarus, R. (2003). On emotions as judgments. In R. Lazarus (Ed.), Not passion's slave: Emotions and choice. Oxford: Oxford University Press.
- Losonsky, M. (2001). *Enlightenment and action from Descartes to Kant: Passionate thought*. Cambridge: Cambridge University Press.
- McClymond, M. J. (1997). Spiritual perception in Jonathan Edwards. *Journal of Religion*, 77(2), 195–216.
- McClymond, M. J., & McDermott, G. R. (2012). *The theology of Jonathan Edwards*. Oxford: Oxford University Press.
- Miller, P. (1948). Jonathan Edwards on the sense of the heart. *The Harvard Theological Review*, 41(2), 123–145.
- Plantinga, A. (2000). Warranted Christian belief. Oxford: Oxford University Press.
- Prinz, J. (2003). Emotion, psychosemantics, and embodied appraisals. *Royal Institute of Philosophy Supplement*, 52, 69–86.
- Prinz, J. (2004). Gut reactions: A perceptual theory of emotion. Oxford: Oxford University Press.
- Prinz, J. (2005). Are emotions feelings? Journal of Consciousness Studies, 12(8-12), 9-25.
- Wainwright, W. (1995). Reason and the heart. New York: Cornell University Press.

Mikael Sörhuus is a PhD student in Philosophy of Religion at the Department of Theology, Uppsala University. In his dissertation, he examines the contributions that contemporary emotion theory can make to epistemological reflection within the Philosophy of Religion. His earlier studies have focused on questions concerning pragmatic approaches to problems of experience, the coherence and incoherence of views of life, and reference in religion.

Chapter 18 Imaginative Expression of Faith and Science: The Poetry of R. S. Thomas

W. Richard Bowen

Abstract Religious faith is expressed in many different ways, such as worship, prayer, ethics and study of sacred texts. Furthermore, each of these ways shows a great variety of form and content. However, serious consideration of the relationship between faith and science has taken place almost exclusively in a form of scholarly scientific discourse. Consequently, the faith-science dialogue lacks expressive richness. It may even have become seriously biased, for such discourse is close to the characteristic form of scientific reporting. Poetry can help redress this imbalance as it is the most intense of the literary forms and can express both reason and emotion. This paper considers the work of R. S. Thomas, one of the great modern poets of spiritual quest. Most unusually for such a poet, Thomas also strove to incorporate the insights and language of science, and to address the dilemmas of technology, in his writing. Thomas's approaches to faith and to science are described as expressed in his poetry, prose and interviews. His original and highly engaging explorations of the relationship of faith and science are presented and evaluated. Reading his work provides a remarkable means of enriching the faith-science dialogue.

Keywords Dialogue • Emotion • Faith • Imagination • Infinitizer • Metaphor • Poetry • Reason • Science • Technology

Introduction

Religious faith is expressed in many different ways. Theologians widely regard worship as being the quintessential feature of faith. Other salient responses include prayer, ethics and reflective study of sacred texts. This variety allows the use of a wide range of our human capabilities in the creative expression of faith. Furthermore,

© Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_18

W.R. Bowen (🖂)

i-NewtonWales, Swansea, Wales, UK e-mail: wrichardbowen@i-newtonwales.org.uk

each of these responses benefits from a diversity of form and content. This is apparent in the many culturally rich traditions of worship and prayer, and in the many acts of compassion and generosity that are inspired by faith. Additionally, our meditation on sacred texts is enriched by their variety of literary forms. In the case of the Bible this includes hymnic, mythic, narrative, parabolic, prescriptive, prophetic and wisdom discourses.

In contrast, serious consideration of the relationship between faith and science has taken place almost exclusively in a form of scholarly scientific discourse. Consequently, the faith-science dialogue lacks expressive richness. It may even have become seriously biased, for such discourse is close to the characteristic form of scientific reporting. Indeed, restriction of faith-science dialogue to this form may be seen as implying that it is only scientific responses to our existence that are ultimately valid. Such restriction raises an important and challenging question: can expression in other forms provide insight into the issues that are significant in the faith-science dialogue?

Poetry is the most intense of the literary forms. It also has a great scope and is able to express and challenge both reason and emotion. It is an important part of many sacred texts. Writing poetry has been used by many as a means of exploring and expressing their faith. R. S. Thomas (1913–2000) has been described as one of the great modern poets of spiritual quest. He was a priest of the Church in Wales by vocation and as a result of a lifetime's devotion to creative writing he became a literary figure of international standing. Most unusually for a poet, and especially so for a poet of spiritual quest, Thomas was knowledgeable about science and consciously strove to address scientific matters in his poems, often blending scientific and religious language. Hence, his work is of particular relevance to the faith-science dialogue.

The present paper will first consider some relevant aspects of the use of poetry in the expression of faith. Secondly, some key features of Thomas's approach to faith will be considered, as expressed in his poetry, prose and interviews. Thirdly, core elements of his approach to science will be outlined, again considering a variety of sources. Fourthly, a single poem that brings together many of the themes of the paper will be considered. Finally, aspects of a role for Thomas's poetry in the enrichment of the dialogue of faith and science will be suggested.

Poetry and Faith

A succinct account of the value of poetry for the expression of faith has been given recently by the theologian Alison Goodlad in the context of a study of the cross and resurrection in the poetry of R. S. Thomas. Goodlad (2012: xiv) writes that the strength of poetry is that 'it challenges the whole person, not just the mind but the heart also'. More specifically she writes that 'It is the heightened sense of reader response that makes poetry so suitable for the exploration of religious truth...intellectual understanding is insufficient on its own' (2012: 10). Goodlad (2012: 10–20)

notes a number of ways in which such intensification of the expression of faith occurs in poetry, including:

- (i) Metaphor: richness of metaphorical apprehension lies at the core of the poets' craft.
- (ii) Memorability: concise poetic expression can reverberate in the mind and engage the imagination of the reader.
- (iii) Ambiguity: multiple levels of meaning and even contradictory meanings can be held together.
- (iv) Irony: the reader needs to be aware that the plain sense of the text may not reflect the intention of the writer.

These features of poetry are somewhat absent from scholarly scientific discourse. Though metaphor is an unavoidable part of such discourse its use is rarely as rich or imaginative as in poetry. It is relatively seldom that more than fragments of scholarly scientific books, articles or lectures are memorably reverberative. Ambiguity and irony are generally regarded as vices in such contexts. Thus, the form of scholarly scientific discourse normally used in the faith-science dialogue may provide a bias against the most convincing expression of faith.

Some of R. S. Thomas's views on the relationship between faith and poetry have been gathered in a collection of prose writings (1983). Thomas 'roughly' defines religion as 'embracing an experience of ultimate reality' and poetry as 'the imaginative expression of such' (1983: 64). He writes that 'it is within the scope of poetry to express or convey religious truth, and to do so in a more intense and memorable way than any other literary form is able to. Religion has to do first with vision, revelation, and these are best told in poetry' (1983: 90). He notes the widespread use of metaphor in the Gospels and even asks 'How can anyone who is not a poet ever fully understand the gospels with their accumulation of metaphor?' (1983: 90). Thomas suggests that the attempt by Christianity to appear reasonable in response to science has made us less able to express feelings in ways such as 'a deep distress hath humanised my soul' (1983: 94).

In an interview filmed as part of a documentary about his life and work, Thomas provided a challenging account of the relationship between metaphor, poetry and faith:

poetry is religion, religion is poetry. The message of the New Testament is poetry. Christ was a poet, the New Testament is a metaphor, the Resurrection is a metaphor ... when I preach poetry I am preaching Christianity, and when one discusses Christianity one is discussing poetry in its imaginative aspects ... My work as a poet has to deal with the presentation of imaginative truth. Christianity also seems to me to be a presentation of imaginative truth ... I'm using the word imagination in its Coleridgean sense, which is the highest means known to the human psyche of getting into contact with the ultimate reality (1972: 53–54).

Thomas's use of the term 'metaphor' in this interview has caused some consternation. However, a metaphor may in essence be considered as a figure of speech that allows us to talk about something by transference of meaning. Here it is helpful to recall Janet Martin Soskice's (1985: 70) vivid example: 'We may warn someone, 'Watch out! That's a live wire', but even if we think wires are not literally 'live' we do not add 'but of course that is only metaphorically true'. It is true and it is expressed with the use of a metaphor'.

R. S. Thomas's Approach to Faith

Thomas's approach to faith was complex and has been the subject of several scholarly studies. His major themes have been summarised as 'the hiddenness of God, the elusiveness of God, the mystery of God, the silence of God, the darkness of God and even the absence of God' (Morgan 2006: 18). He has been described as having had 'a sceptical mind, of the most dangerous sort: a moral scepticism about the goodness of the creator' (Harries 2012: ix). It has been suggested that he was 'in his incomparable poetry, one of the most sublime of modernity's doubting Thomases' (Wynn Thomas 2013: 239). Yet, his honesty and creativity have had a great impact on his readers, and it has been noted that 'There is no doubt that he has helped thousands of people in their quest for a faith that can stand the rigour of intellectual scrutiny' (Morgan 2013). Here it is possible to mention only some features of his approach to faith that are especially relevant to the present study.

One of the most striking features of Thomas's faith as described in his poems is his strong commitment to prayer. In an early poem, 'In a Country Church', he writes:

To one kneeling down no word came, ... He kneeled long, And saw love in a dark crown Of thorns blazing, and a winter tree Golden with the fruit of a man's body. (CP: 67)

He writes of unexpected urges to prayer in circumstances that reflect his unease with aspects of established religion:

in a church porch on an evening in winter, the moon rising, the frost sharp, he was driven to his knees and for no reason he knew. ... and kept his place there for an hour on that lean threshold, neither outside nor in. ('The Porch', CP: 326)

For Thomas, prayer is about silence, listening, waiting:

Moments of great calm, Kneeling before an altar Of wood in a stone church In summer, waiting for the God To speak; The meaning is in the waiting. ('Kneeling', CP: 199)

Thomas lived his priestly vocation entirely in rural parishes, 'I was vicar of large things/in a small parish' (ERS: 25), and nature was an essential feature of his faith: 'I'm a solitary, I'm a nature mystic; and silence and slowness and bareness have always appealed' (Thomas 1972: 51). In his autobiography he wrote, 'And looking on morning dew in the sun was like listening to the heavenly choir singing glory to God. He was doubtful whether, in an industrial town, he could have worshipped and continued to believe' (Thomas 1997: 84). For Thomas, nature can provide glimpses of eternity:

I have seen the sun break through to illuminate a small field for a while, and gone my way and forgotten it. But that was the pearl of great price, the one field that had the treasure in it. ('The Bright Field', CP: 302)

This he compares later in the poem to 'the turning/aside like Moses' to the burning bush, an image that occurs many times in his work.

However, perhaps the nature theme which is most particularly characteristic of Thomas's poetry concerns birds:

Birds existed millions of years before the advent of man. They are beautiful and full of life, and have adapted perfectly to their own needs ... And spending an hour or two looking over the sea hoping to see a migratory bird, he came to see the similarity between this and praying. He had to wait patiently for a long time for fear of losing the rare bird, because he did not know when it would come by. It is exactly the same with the relationship between man and God that is known as prayer. Great patience is called for, because no one knows when God will choose to reveal himself. (Thomas 1997: 99–100).

Expressed in poetry, these thoughts become:

Ah, but a rare bird is rare. It is when one is not looking, at times one is not there that it comes. You must wear your eyes out, as others their knees. ('Sea-watching', CP: 306)

Thomas's poetry shows a rich variety of images connected with birds. Moreover, not all birds are so elusive:

Listening to blackbird music is to bridge in a moment chasms of space-time, is to know ... there is a presence whose language is not our language. ('Blackbird', UP: 160)

Furthermore, the life of birds can serve as an image for our spiritual aspirations:

Winged God

approve that in a world that has appropriated flight to itself there are still people like us, who believe in the ability of the heart to migrate, if only momentarily, between the quotidian and the sublime. ('Bird Watching', CLP: 265)

A further important theme apparent in much of Thomas's poetry is a great unease with the tendency of institutional religion to try to define God too closely: 'Father, I said, domesticating/an enigma; and as though/to humour me you came' ('AD', CLP: 121). This unease is dramatically illustrated by the description of a caged tiger:

It was beautiful as God must be beautiful; ... a body too huge and majestic for the cage in which it had been put; ... but breathing as you can imagine that God breathes within the confines of our definition of him. ('The White Tiger', CP: 358)

This unease extends to common practices of churches:

They laid this stone trap for him, enticing him with candles, as though he would come like some huge moth out of the darkness to beat there. ('The Empty Church', CP: 349)

In contrast, the openness of Thomas's view of God allows him to ask hard questions, 'And in the book I read:/God is love. But lifting/my head, I do not find it/so' ('Which', CP: 297). These hard questions are strongly influenced by Thomas's country lifestyle, for he was well aware of the suffering and violence in nature, and of the difficult lives that many of his parishioners lived. This hard questioning has led to a description of Thomas as 'the Christian poetic voice of counter-testimony' (Goodlad 2012: 23). Thus, he is seen as having lived an authentic, questioning faith in the tradition of Job and the Psalms.

R. S. Thomas's Approach to Science and Technology

In his later poetry Thomas consciously sought to use the language of science. He regarded science and technology as 'vital areas of man's concern' and explained in an interview that 'owing to the enormous part science and technology play in our lives, a divorce of poetry from them would be injurious to the development of poetry and would alienate people from it, as has already occurred to some degree' (Thomas 1993b: 37). In the same interview he referred to reading the works of Fritjof Capra

and Paul Davies, mentioning astronomy, relativity theory and nuclear physics. Copies of Capra's *The Tao of Physics* (1975) and of Ian Ramsey's *Religion and Science: Conflict and Synthesis* (1964) were in his personal library when he died (Westover 2011: 145; 195 n.88). The influence of science is shown in the titles of some of his published collections of poetry, such as *Laboratories of the Spirit* (1975) and *Frequencies* (1978).

Thomas saw no fundamental conflict between pure science and faith, indeed he thought that 'If pure science is an approach to ultimate reality, it can differ from religion only in some of its methods' (1993b: 37). He also understood well the limitations that a non-scientist faces in trying to understand the nature of scientific endeavour, 'My joustings with scientists are probably with the lesser fry, because I imagine those of the first rank exercise a wonder at creation which is akin to religion' (1993b: 37). He is probably overly-modest in such assessment, for he clearly understood, for example, 'The scientists teach/the possibility of thinking/without words' ('Preference', CLP: 156), that is 'scientists, too, in mathematics are engaged in modes of expression which differ only to a degree from those of artists in the broadest sense' (1993b: 45). He also understood the diversity of science: 'One must not generalize too freely about science any more than about Christianity. It has many branches, some of them perhaps poetic in themselves' (1983: 93).

However, in his priestly role Thomas had a serious concern about the effect on his congregation of common misunderstandings of the nature of science: 'Many former worshippers have lost their faith because of the popular but over-simple presentation of science and technology. R. S. would attack these dogmas quite consistently, seeking to counteract their injurious influence on the majority of people' (1997: 85). He gave a precise and insightful explanation of the underlying basis of these misunderstandings: 'We are becoming so conditioned by the scientific view of things that we are in danger of accepting as truth only an experiment that can be repeated; that is, of accepting as true only that which can be proved. Whereas the use of imagination should remind us that we are surrounded by mystery' (1993b: 39).

Hence, the dangers of scientism are a major concern in Thomas's later poems: 'They have exchanged/their vestments for white coats' ('Ritual', CP: 496). For Thomas science is important but not without dangers:

Beset, as we were, with science's signposts, we whimpered to no purpose that we were lost. ('AD', CLP: 112)

For him the great insights of the physical sciences do not reach to knowledge of the divine:

I need a technique

other than that of physics for registering the ubiquity of your presence. ('Gradual', CP: 411).

The biological sciences have the same limitations:

Genes and molecules have no more power to call him up than the incense of the Hebrews

at their altars. ('The Absence', CP: 361).

Thomas can describe the inappropriate application of quasi-scientific methods with intense irony:

```
'I love you.'

'How much?'

'1<sup>32</sup> × √-1.'

'Wait a minute, let me

compute my thanks.

There.

Meet me tonight

at SH 126 243

so we may

consummate our statistics.' ('Sonata in X', CLP: 208)
```

Nevertheless, despite the threat of scientism, his overall assessment of pure science is very favourable: 'He has also lived long enough to know that the discoveries and theories of the scientists have given birth to a universe that even the imagination of man fails to comprehend ... Aren't we back with the people who wrote the Bible, who would confess that such knowledge was too wonderful for them?' (1997: 105).

However, Thomas's assessment of technology is less positive: 'Yes, I am, generally speaking, anti-technology ... The main criticism is that the machine is dehumanizing. It also insulates man from natural processes' (1993b: 37). The negative role of machines is a recurrent theme in his poetry. It occurs even in an early (1952) poem about a poor hill-farmer acquiring a tractor:

Ah, you should see Cynddylan on a tractor. Gone the old look that yoked him to the soil; He's a new man now, part of the machine, His nerves of metal and his blood oil.' ('Cynddylan on a Tractor', CP: 30)

Moreover, his generic idea of 'the machine', which occurs in many poems, has a wider and more sinister implication. It has been described as 'Thomas's short-hand description of the products of the state of mind that give rise to what F. R. Leavis used to call "technologico-benthamite civilization" (Wynn Thomas 2013: 174).

This perceived perversion in the application of science is linked by Thomas to '*cupido*, the insatiable greed in man that gave birth to machines and aeroplanes and missiles and all the technology of the contemporary world' (1997: 108). He sees such consequences as being dormant even in the thirteenth century work of one of the founders of science:

```
And the rainbow
ended there not in a pot
of gold, but in colours
that, dissected, had the ingredients of
the death ray. ('Roger Bacon', CP: 354)
```

For Thomas the influence of 'the machine' is deeply pervasive and he appears especially concerned about its tendency toward violence: 'The body is mine and the soul is mine' says the machine. 'I am at the dark source where the good is indistinguishable from evil. I fill my tanks up and there is war. I empty them and there is not peace.' ('AD', CLP: 115)

Thomas was a committed pacifist and a supporter of the Campaign for Nuclear Disarmament.

For Thomas, technology appears to have little or no benefit for faith:

The telephone is the fruit of the tree of the knowledge of good and evil. We may call everyone up on it but God. ('Calling', CP: 497)

Or more modernly:

The computer is unable to find God: no code number, no address. ('The computer is unable', UP: 172)

Indeed, he contrasts the experience of Easter, 'how a stone has been rolled/from the mind', to 'a machine stranded/beside the way for lack/of petrol' ('Resurrection', SP: 336). However, he acknowledged that technology could have practical advantages, sometimes life-saving advantages, such as when at times of storm 'R. S. would give thanks the machine had arrived, to save ships from being at the mercy of such seas' (1997: 91).

Considering a Single R. S. Thomas Poem

This paper has so far quoted only fragments of Thomas's poetry. Although the primary aim is to describe the relevance of Thomas's work to the faith-science dialogue rather than literary analysis, it is nevertheless valuable to consider an entire poem in order to give a fuller indication of the particular power of his work to contribute to this dialogue. This raises the tricky question of how poetry differs from imaginative prose. Thomas has himself made some suggestions: 'when I write a poem I am deploying language at a higher tension, in a more concise and memorable way than when writing prose', and 'In shorthand I would say that the difference is in cadence' (1993b: 42, 44).

The example to be considered is from one of Thomas's most innovative works, *The Echoes Return Slow*. This is an unusual kind of autobiography in which a short prose piece is printed on each left page and matched by a related poem on the corresponding right page. Thus, on p. 88 is printed:

Because Coleridge had said that the opposite of poetry was not prose but science, that was what he preached from the pulpit at times, his eye straying through the leaded window to the sea outside that passed and remained always. He defended himself with the fact that Jesus was a poet, and would have teased the scientists as he teased Nathanael.

These provocative two sentences relate several pertinent aspects of Thomas's work: poetry, science, nature and faith. This prose is already at a 'higher tension' compared to much scholarly scientific discourse. On p. 89 is a matching poem:

I have waited for him under the tree of science. and he has not come: and no voice has said: Behold a scientist in whom there is no guile. I have put my hand in my pocket for a penny for the engaging of the machinery of things and it was a bent penny, fit for nothing but for placing on the cobbled eyeballs of the dead. And where do I go from here? I have looked in through the windows of their glass laboratories and have seen them plotting the future, and have put a cross there at the bottom of the working out of their problems to prove to them that they were wrong.

This is highly allusive writing using a wide range of literary techniques, including metaphor, reverberative memorability, ambiguity and irony. It shows the breaking of sentence structure and use of page placement that is characteristic of Thomas's later work. These latter effects draw attention to particular words and engage the reader actively into anticipation of the poem's direction and meaning. Many of the key themes of Thomas's work are present in this one poem, including: patient waiting; biblical reference, to the encounter between Nathanael and Jesus in the *Gospel of John* (1: 43–51); the inability of science to provide ultimate explanations; the threat of 'the machine', especially the link to violence and death; the corrupting influence of money; scientific hubris; the continuing significance of the Gospel narrative. The simple events described carry an abundance of meanings, especially the link to the tree under which Nathanael stood. There is great economy of expression: for example, the 'bent penny' implying both the failure of a machine and financial dishonesty; 'a cross' implying both the ultimate inadequacy of science and a surer source of salvation.

Such analysis could proceed at length. However, the most important point is that reflection on such a poem can give insights that are unattainable in conventional scholarly discourse. Such richness of poetic expression is a very valuable resource for furthering the dialogue of faith and science.

R. S. Thomas and the Dialogue of Faith and Science

The strength of poetry is that it challenges the whole person, both reason and feelings. In contrast, the dialogue of faith and science has been almost entirely in terms of reason. Thus, an important means for enriching the dialogue is 'To learn to distrust the distrust/of feeling' ('Perhaps', CP: 353). Thomas's poetry is a particularly valuable means of seeking to do so in this context. His poetry can provide striking expression of the role of feeling at the human level:

If one asked you: 'Are you glad to have been born?' Would you let the positivist reply for you by putting your car in gear, or watch the exuberance of nature in a lost village, that is life saying Amen to itself? ('Fugue for Ann Griffiths', CP: 474)

This encompassing of feeling, especially during the difficult task of waiting and listening, is particularly noteworthy in his writing about prayer and glimpses of eternity:

Well, I said, better to wait for him on some peninsula of the spirit. Surely for one with patience he will happen by once in a while. It was the heart spoke. ('Emerging', CP: 355)

Two features of such listening and waiting deserve special attention in the context of the faith-science dialogue. First, though prayer has been the subject of scientific study it is much subtler than, and very different in nature from, the attempt to influence events that such studies typically assume. However, even a self-designated 'reductionist materialist atheist' such as Lewis Wolpert (2006: 124) can value some of the significance of prayer, so Thomas's evocative descriptions may prove valuable in the faith-science dialogue. His comparisons of prayer and bird watching will certainly have a resonance for many scientists. Secondly, the glimpses that arise in waiting, in prolonged prayer, cannot be captured by the scientific method with its emphasis on controlled reproducibility. However, Thomas tells us that meditative prayer may provide genuinely new insights that can be held in parallel with the conclusions of reason:

The evolutionists told me I was wrong. My premises, the philosophers assured me, were incorrect. Perpendicular I agreed, but on my knees looking up, cap in hand, at the night sky I laid astronomy on one side. ('Sonata in X', CLP: 206).

Thomas has described the role of the poet in mediating such experiences: 'The mystic fails to mediate God adequately insofar as he is not a poet. The poet, with possibly less immediacy of apprehension, shows his spiritual concern and his spiritual nature through the medium of language, the supreme symbol' (1983: 65). Expressed more wryly this becomes: "About that of which we cannot speak, we must needs be silent." He evaded Wittgenstein, if not the publisher, by committing his silence to paper' (ERS: 48).

Thomas's poetry is also of value as a means of engaging with a very neglected aspect of the faith-science dialogue: the question of ethics. Ramsey's *Religion and Science: Conflict and Synthesis* contains an account of the prophet Nathan's challenge to David after the death of Bathsheba's husband Uriah (2 *Samuel* 11–12). Thomas had written next to this in his copy of the book, 'Who is to act as a Nathan to the scientist?' (Westover 2011: 146). Nathan subtly guided David to a realisation of his ethical failings. Thomas's expressive descriptions of his concerns about science, technology and 'the machine' can certainly guide scientists into taking the ethics of their professional activities more seriously. More particularly, the intimate way in which he often mixes the language and concerns of faith and science provides a sensitive challenge to scientific work. Thomas's perceptions of the role of greed and the tendency to violence in science should be especially provoking in this context. Indeed, his poetry may be seen as forming part of the answer to the question about Nathan that he posed.

However, probably the most important aspect of Thomas's poetry in the context of the faith-science dialogue is his eloquent rejection of totalizing explanations. Totalizers seek control of understanding by focusing on closed orders of knowledge. They include, in the context of science, reductionist materialists, and, in the context of faith, theistic fundamentalists or literalists. Thomas was rather an infinitizer (Levinas 1961/1969; Bowen 2012: 151) seeking creative advance through the use of the imagination in ways that were essentially exploratory rather than definitively explanatory. It is in dialogue between infinitizers, both of faith and nofaith, that advances in understanding the relationship between faith and science are most likely to be made (Bowen 2014). Thomas's exceptional status as a poet of faith who sought to understand science allowed him to write in ways that constitute an original and highly engaging perspective on this relationship. Reading his poetry provides a remarkable opportunity 'for the better ventilating/of the atmosphere of the closed mind' ('Adjustments' CP: 345).

Acknowledgements I thank Iselin Eie Sokhi and M. Wynn Thomas for perceptive comments during the development of this paper.

References¹

- Bowen, W. R. (2012). The nature of faith: Entering dialogue with scientific new-atheism. In D. Evers, M. Fuller, A. Jackelén, & T. Smaedes (Eds.), *Studies in science and theology* (Vol. 13, pp. 143–159). Tübingen: Forum Scientiarum.
- Bowen, W. R. (2014). The openness of life: personhood and faith An infinitizer approach. In D. Evers, M. Fuller, A. Jackelén & K-W. Sæther (Eds.), *Issues in science and theology: What is life*? (pp. 117–128). Cham: Springer.
- Goodlad, A. (2012). Leaving the reason torn. Edinburgh: Shoving Leopard.
- Harries, R. D. (2012). Foreword. In A. Goodlad, *Leaving the reason torn* (pp. ix–x). Edinburgh: Shoving Leopard.
- Levinas, E. (1969). *Totality and infinity*. Pittsburgh: Dudesque University Press. (Originally published as *Totalité et Infini*. The Hague: Martinus Nijhoff, 1961).
- Morgan, B. (2006). Strangely orthodox. Llandysul: Gomer Press.
- Morgan, B. (2013). Presidential address to the governing body of the church in Wales. http://www. churchinwales.org.uk/structure/bishops/sermons-and-addresses-archbishop-barry-morgan/ presidential-address-governing-body-september-2013/. Accessed 27 June 2014.
- Soskice, J. M. (1985). Metaphor and religious language. Oxford: Oxford University Press.
- Thomas, R. S. (1972). 'R. S. Thomas: Priest and Poet', a transcript of John Ormond's film for BBC television. *Poetry Wales*, 7, 47–57.
- Thomas, R. S. (1983). Selected prose. Bridgend: Poetry Wales Press.
- Thomas, R. S. (1988). The echoes return slow. London: Macmillan.
- Thomas, R. S. (1993a). Collected poems 1945-1990. London: J.M. Dent.
- Thomas, R. S. (1993b). 'Probings: An interview with R. S. Thomas', N. Thomas and J. Barnie. In W. V. Davies (Ed.), *Miraculous simplicity* (pp. 21–46). Fayetteville: University of Arkansas Press.
- Thomas, R. S. (1997). Autobiographies. London: J.M. Dent.
- Thomas, R. S. (2003). Selected poems. London: Penguin.
- Thomas, R. S. (2004). Collected later poems 1988-2000. Tarset: Bloodaxe Books.
- Thomas, R. S. (2013). Uncollected poems. Tarset: Bloodaxe Books.
- Thomas, M. Wynn. (2013). R. S. Thomas: Serial obsessive. Cardiff: University of Wales Press.
- Westover, D. (2011). R. S. Thomas: A stylistic biography. Cardiff: University of Wales Press.
- Wolpert, L. (2006). Six impossible things before breakfast. London: Faber & Faber.

W. Richard Bowen is a Fellow of the UK Royal Academy of Engineering, Initiator of i-NewtonWales and Professor of Engineering at University of Wales Swansea. He also holds degrees in physical sciences (Oxford) and theology (Wales). Recent publications include *Engineering Ethics: Challenges and Opportunities* (Cham: Springer International Switzerland, 2014) and *Peace Engineering* (Lakeshore: Woodsville, 2013, ed. with P.A. Vesilind). In theology and philosophy he has special interests in understanding across conceptual schemes and ethics.

¹Abbreviations used in text: CP – *Collected Poems 1945–1990*; CLP – *Collected Later Poems 1988–2000*; ERS – *The Echoes Return Slow*; SP – *Selected Poems*; UP – *Uncollected Poems*.

Part IV Philosophical Reflections

Chapter 19 Mr. Spock and the Gift of Prophecy: Emotion, Reason, and the Unity of the Human Person

Alfred Kracher

Abstract Emotions are a central and indispensable part of our cognitive equipment by which we apprehend the world. But until fairly recently Western philosophical thinking about emotions was dominated by a model of adversarial relationship with rationality. This is particularly a heritage of Enlightenment philosophy, but has antecedents in Stoicism. Classical Stoics regarded emotions as judgments, but thought they were invariably wrong or misleading. With regard to Christianity an 'intellectualization' of God, making him the seat of purified, emotionless rationality, has also contributed to the problem. But for the sake of personal integration we cannot have components of our mind at permanent war with each other, whatever occasional conflicts may arise. Emotions could not be the product of evolution if they were always misleading. Healthy moral and spiritual development of the whole person needs to take both emotions and intellect seriously. This development has often been described as spiritual ascent, but this metaphor brings with it the danger of looking down on our un-ascended fellow humans. There are resources for integrating human emotions in moral and spiritual development, not just from contemporary psychology, philosophy, etc., but also from past spiritual writers in the Christian tradition.

Keywords Adversarial model • Age of reason • Cognitive capacity • Rationality • Human completeness • Moral ascent • Divine emotions • Spirituality • Religious formation

© Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_19

A. Kracher (🖂)

¹⁵⁸³⁷ Garden View Dr, Apple Valley, MN 55124-7006, USA e-mail: akracher1945@gmail.com
Introduction

Most people have probably wondered at one time or another if we would not be better off without having emotions. At times they can be quite inconvenient, especially when they arise spontaneously at inopportune occasions. Aside from the selfreferential problem that our occasional annoyance with our own emotions is itself also an emotion, the fascination is curiously limited. If we see an actual human being devoid of emotion, for example a criminal at trial, we tend to find it 'creepy' another emotional judgment on our part.

This ambiguity of everyday experience is reflected in scholarly controversies over the nature of emotions that reach back to Antiquity. Within the diversity of opinions is one common thread: understanding and dealing with emotions is vitally important. Humans are emotional beings by nature, and whatever we think of them, emotions are morally significant. To put it a different way, in order to flourish each person has to decide on the role that emotions ought to play in one's life. Mary Midgley calls our need for coherence among thought, feeling and action the unity of the personality and rightly points out that its absence causes moral damage (Midgley 2003: 100). I will here use the similar metaphors of completeness or integration, and use the term complete person to characterize an individual who leads a morally good life, one in which all aspects of a healthy personality are adequately developed. In sections "Partial and complete humans", "Metaphors of improvement" and "Traditional spiritual resources" this will be explained in more detail and connected to other metaphors overlapping that of human completeness.

Emotions play a central role in attaining this balance or individual completeness. They are therefore also of crucial importance to a healthy spirituality and hence to religion. Cultural ideas and attitudes about emotions can either promote or detract from this goal of spiritual health. In this paper I will argue that in Western Christianity an unfortunate intersection of historical developments has often led to a largely unhealthy attitude toward emotions, notwithstanding the fact that excellent positive resources exist in the Christian spiritual tradition as well.

Since there are different opinions about what emotions are, an introduction about the nature of emotions is needed before illustrating prevalent opinions about emotions by example. My title refers to two significant markers in the perception of emotions. The first is the survival of the Stoic model in popular culture, exemplified by the fictional Mr. Spock of Star Trek fame. The second comes from the beginning of the Age of Reason and is further explained in section "Emotions and the age of reason". In between these sections there is a brief look at the changing opinions about whether God has emotions and what they might be. In spite of beginning with contemporary science fiction, this is in one sense a chronological arrangement, Mr. Spock standing for the Stoics of Antiquity. The different ideas represented in these sections — Stoicism, the loss of divine emotions, and the ascendency of 'pure' reason — each create their own particular problem for both religious and secular valuation of emotions. There are, however, also resources to regain a view of emotions more conducive to human completeness. By the nineteenth century philosophy began to rethink the view of reason and emotions as irreconcilable enemies, although the latter view also persists. For a much older example from the spiritual tradition of Christianity I take a very brief look at Ignatius of Loyola (1491–1556) and his constructive view of emotions. In today's pluralistic world, with its often bewildering variety of trends and opinions, these resources have taken on particular importance, because the recovery of human completeness has become an urgent matter.

The Nature of Emotions

A definition of emotions very nearly parallels Augustine's dictum about time: if no one asks we know exactly what they are, but it is extremely hard to give a cogent definition. Much of the details of scholarly discussion are beyond the scope of this paper as well as outside my area of competence. However, some common sense conclusions can be drawn from human evolution and everyday experience. Of course such a simple picture is not in any sense a theory of emotions, but it will serve as an adequate basis for the purpose of this paper. Robert Solomon acknowledges the need for coherence with evolution and spells out what else a successful theory of emotions would have to cover (Solomon 2003, chapter 8).

As Solomon, Martha Nussbaum (2001) and others point out, a major disagreement concerns the cognitive or non-cognitive character of emotions. Some of this arises because different disciplines have different definitions of 'cognition.' Technically it means approximately the processing of sensory input for the purpose of some kind of application, action or informational output. Used in this sense any living organism as well as certain machines can be capable of cognition. But when it comes to calling emotions either cognitive or not, something much more narrow is usually implied, a process inside the mind of humans (or very advanced animals) that involves consciousness. Since cognition in this much narrower sense has presumably evolved in organisms as a component of the former, the designation is not unreasonable, but it is a source of confusion. Where necessary I will refer to the former as cognitive function in a wide sense, and to the latter as higher cognitive function (the altitude metaphor is unavoidable here).

With this clarification in mind, let us consider in crude outline the evolution of our higher cognitive system from presumed precursors at the first appearance of neural structures. The neural systems of the oldest and most primitive animals must have simply provided reflexes to specific stimuli. Machine simulations demonstrate that even simple, inorganic cognitive systems are capable of fairly complex motoric actions that seem purposeful (Braitenberg 1984). With the addition of memory ('has this situation occurred before?') and some awareness of internal states ('am I currently strong enough for what I intend?') we can account for the behavior of a wide range of animals. These aspects combine into a cognitive system that will also require some incentive, a drive (*Trieb* in the German literature) that interacts with cognitive functions at a higher level. Ethologists thus infer animal emotions in the context of motivational analysis. Konrad Lorenz gives the example of competing

fear and aggression (tied to anger) in a dog, complete with illustrations of the accompanying facial expressions (Lorenz 1963: 142). Few people today would deny that dogs have emotions, even though we cannot exactly say what it 'feels like' to them (I have discussed this issue in Kracher 2002).

As Lorenz's example vividly shows, emotions in animals can be in conflict with one another. In fact, all life is subject to conflicts. For some simple invertebrates conflict resolution may just be a matter of the physically stronger stimulus, but Buridan's ass, equidistant between identical haystacks, does not really starve to death. He just takes a while to make up his mind, as donkeys are known to do. To 'make up one's mind' means to break a stalemate among divergent motives (whether they are emotions or not). But when the situation requires an instantaneous decision, the response still works very much like a simple neural reflex. If for example a lion were to show up, the overpowering emotion of fear would make up the donkey's mind for him.

However, as biological complexity, the scope of available action, and thus the likelihood and complexity of conflicts all increase, there is more need for deliberation. It is not my purpose to enter the discussion 'where human rationality comes from,' but it is obvious that our capacity for rational deliberation is the faculty required to maintain the ability for adaptive actions in the face of conflicting motivations. Mary Midgley, who has discussed this connection between evolution and rationality in all of her books, summarizes the evolutionary aspect: 'our lives are more complicated than those of limpets, so we naturally have more dilemmas' (Midgley 2010: 99).

Emotions thus seem to be one part of the entire cognitive system, taken in the wide sense, of a human person. Their function at one extreme connects with reflexes, which are involuntary and immediate. At the other extreme they connect to fully conscious, voluntary mental acts, and so are cognitive in the narrow sense of the higher cognitive functions only found in humans (and possibly close biological relatives). Emotions and rationality are parts of the complex and sophisticated apparatus by which we apprehend and deal with the outside world. In evolutionary terms emotions are a more fundamental part, and hence rationality in some ways builds on this foundation; perhaps it has evolved as the kind of critical arbiter that Midgley thinks it is. Let us call this whole a unified mental structure. I will return to this picture later.

Anastasia Scrutton (2011) points out that historically not all authors have shared a concept of emotions in the sense we use it today. Augustine and Thomas Aquinas, for example, use separate words for the reflex-like passions (*passiones*) and the higher cognitive affects (*affectiones*). Unlike their view, Scrutton regards these as the end members of a continuous emotional spectrum, in agreement with the picture of continuity regarding mental faculties sketched here.

In light of this picture it makes sense that, in the words of Martha Nussbaum (2001), emotions 'involve judgments about important things, judgments in which, appraising an external object as salient for our own well-being, we acknowledge our neediness and incompleteness before parts of the world that we do not fully control' (p. 19, paraphrase). Nussbaum and Solomon are mostly concerned with the

affectiones over which we have some control, although both acknowledge the continuum that Scrutton describes. Nussbaum in particular points out that the view of emotions as judgments goes back to the Greek and Roman Stoics, but unlike herself the Stoics always considered them bad or cognitively misleading judgments, and hence demanded that morally superior people should eliminate them from their minds. She also shows how the Stoic account has to be modified given what we know about evolution and animal behavior (Nussbaum 2001: 89–138).

In light of evolutionary history the Stoic view that emotions are invariably wrong judgments is clearly untenable. If emotions would always result in wrong actions, they could not have evolved. On the other hand, if our reasoning faculties are in part the evolutionary answer to irresolvable conflicts of lower cognitive functions in the face of overwhelming complexity, the Stoic mistake is to some degree understandable.

Learning from Mr. Spock

The fictional character of Mr. Spock in Star Trek is a modern manifestation of classical Stoicism. Many more people are familiar with his character than have read Seneca or Marcus Aurelius, and he therefore serves, in my title and in this paper, as the paradigm of the individual who considers his emotions as invariably detrimental to rational problem-solving. Since this long-standing idea forms one source of our contemporary trouble with emotions, it is worth considering Mr. Spock in more detail.

Mr. Spock's negative view of emotions is not a personal quirk, but is the opinion and training of Mr. Spock's Vulcan culture as it emerges from the narrative. The philosophical and sociological aspects that are addressed reflect the serious interests of Gene Roddenberry (1921-1991), the creator of the Star Trek science fiction universe.¹ But the reason why, as a fictional person, Mr. Spock captures our interest is, I think, that he embodies our own misgivings about emotions mentioned in the Introduction above. Creating characters and stories that are interesting to a wide audience, but with a serious philosophical background, serves as a kind of thought experiment about the viability of the underlying principles (Kracher 2006). Even though the setting of Star Trek is fictional and scientifically unrealistic, one can recognize known ethical theories working themselves out in particular episodes (Barad and Robertson 2000). In keeping with the Star Trek tradition of using alien societies with exaggerated cultural traits (belligerent, mercenary, anti-emotional, etc.), Mr. Spock draws attention to culturally determined attitudes regarding emotions. In this case the cultural repression is due to a history of civil war whose violence is blamed on the excessive or uncontrollable emotions of ancient Vulcans. The Vulcans, like the ancient Stoics, obviously believe that by suppressing all emotions

¹A comprehensive wiki-like reference to the universe is http://en.memory-alpha.org (accessed 6 May 2015). References to the Star Trek canon in this section are based on articles at that site.

one can build a better society. Before discussing in later sections whether this is a realistic political view, we will first ask whether Mr. Spock is plausible as an individual.

Two things are noteworthy. First, although Mr. Spock plays a prominent role in the original Star Trek series, we get the impression that as a 'man without emotions' he makes a perfect executive officer, but the spaceship also needs a captain, and he is human. Maybe we are to infer that a well-integrated personality, with emotions as well as intellect, is better suited for this position. Second, Mr. Spock does not usually refer to his anti-emotional character as 'rational,' but as 'logical.' We should perhaps take this as his ability for the logical evaluation of neutral facts (if there is such a thing). This reinforces his connection to ancient Stoicism, which is credited with having made advances in formal logic (Baltzly 2014). Logic would of course be regarded as the foundation underlying rational behavior, but it is a more limited and different, more formal, concept. This terminology might just be an acknowledgement that other intelligent creatures, *Homo sapiens* for example, have cause to think of their own reasoning ability in different ways, even if Mr. Spock sometimes does not understand them. The distinction is also significant in connection with different conceptions of 'reason' by different philosophers. The meaning of 'logic' is not controversial, but scholars may disagree on their respective understanding of rationality. For example, Mary Midgley attacks the idea that being rational requires the suppression of emotions: 'The Stoic apathes, the man without feeling, too dignified to be moved at all by the death of his own children, is not really a specially rational being' (Midgley 2003: 107).

Grief is not only a natural, but a conceptually and morally proper response for a mature human in such a situation. Martha Nussbaum makes a similar argument with regard to compassion, which Stoics likewise objected to as a violation of human dignity. She argues convincingly (Nussbaum 2001: 401–454) that compassion is a necessary requirement for rational justice.

We have to keep Mr. Spock's rejection of emotions in mind as one of the problems that beset the treatment of emotions in religion. Before we can reach a better assessment, we have to look at two other historical developments that bear on this question: God's emotions and the exaltation of reason in Enlightenment.

Divine Emotions

Humans have apparently always believed in non-human emotions. Even today we use animistic, emotive metaphors, as when we speak of an angry sky or a serene landscape. As for beliefs of past millennia, it is of course not always easy to distinguish between myth, metaphor, and factual belief. But clearly gods, and not just the Olympian ones, were notoriously subject to human-like emotions. In the Hebrew Scriptures God exhibits a wide range of emotions, including some, like jealousy, which we do not find unquestionably positive in fellow humans. But in a world of tribal deities, God's jealousy may have been an important metaphor in the emerging

exclusive monotheism. In fact Scrutton (2011) argues for continuing to attribute jealousy to God as inseparable from his love.

Early Christianity was strongly influenced by Neoplatonism and Stoicism and their (mostly negative) view of emotions. In discussing this influence, however, Scrutton (2011, chapter 1) warns that our modern concept of emotions tends to flatten out and lump together phenomena that were traditionally regarded as distinct by classical philosophers and early Christian writers. A range of more or less distinct phenomena known in Latin as *passiones, motus animae, libidines*, etc. (Scrutton 2011 lists no less than 23 different Latin words, although a few are mere spelling variants) spread across a semantic map covering what we call emotions, feelings, moods, or desires to varying degrees. And each of these were seen by different authors as positive, negative, or ambiguous in various ways. But overall it is none-theless clear that in early Christianity there was heavy emphasis on purifying these various mental states of the individual person from all earthly desires. The paradigmatic opinion was Augustine's famous theory that sexual desire did not exist before the Fall from Paradise. We will have to return to the lasting damage this idea has done in later sections.

Furthermore, though Stoic *apatheia* was a (perhaps unattainable) ideal for humans, a perfect God would necessarily be the perfect emotionless *apathēs*. Of course the Christian axiom that God is Love remained untouched, but we can rightly question whether love in this context could still be understood in the sense of an emotion. The Stoics did after all retain a concept of love, but gave it a sense of rational benevolence rather than an (in their view) objectionable *passio*.

Two problems arise here. First, an omnipotent being cannot feel incompleteness and acknowledge lack of control. Nussbaum, who uses this definition of emotion, is mostly interested in human emotions and has little to say about God's. Nonetheless she also tries to rescue divine love as true emotion: '[T]he attachment to the concerns of the suffering person is itself a form of vulnerability: so a god, in allowing himself to be so attached, renders himself to a degree needy and not self-sufficient' (Nussbaum 2001: 318). It is an idea that connects well with a Christian concept of *kenosis*, but will probably not remove all difficulties for other theistic conceptions.

Second, emotions come as plural — not only grammatically, but also as part of the emotional range and repertoire of an individual (more about the grammatical point later). It is in the nature of human emotions to change with time. Isaiah compares God's love to a mother's love for her child (Is 49: 15), which is a poignant expression of love's endurance. But even here, when it comes to human emotions, the strength of this love is expressed by overpowering other, conflicting emotions (anger, disappointment), and engendering temporary concomitant ones (anxiety). Emotions have '…a dynamic relationship to one another' (Nussbaum 2001: 87), and dynamics implies change. In the absence of any other emotion, nor any possibility of change, divine love cannot be understood on an analogy to human emotions. Perhaps Mr. Spock's unwavering 'logical' loyalty to his spaceship and its crew comes closer to the intellectualized God of Medieval theology than Isaiah's motherly comforter.

On the other hand, a completely rational approach on the part of God cannot be squared with another traditional theme of Christian theism, namely that God forgives sins 'beyond reason.' And there are other elements of Medieval Christianity that counteract, and to some degree even contradict, the intellectualizing trend. One of these is the acknowledgment that not all tenets of Christian faith are amenable to the principles of logic so prized by the Stoics. Theologians argued, for example, whether the doctrine of the Trinity could be understood using Aristotelian logic, or whether it required its own 'paralogism' (the word is today most often used as a synonym for fallacy, but it was not so used in the Middle Ages) in contravention to the syllogistic logic that applied elsewhere (Shank 1988, 57–138).² Scholastic theologians were content to let certain aspects of faith remain mystery beyond logic.

A religious phenomenon that similarly kept the exaltation of pure reason from becoming absolute in the Middle Ages was the experience of mystics like Francis of Assisi, Julian of Norwich, and many others. Although frequently looked at with suspicion by official theology and church authority, it was not doubted that mystical experience as such was an experience of God that was outside rationality.

We should also not be misled into projecting our notion of emotions and reason as adversaries back to a time before the Age of Reason. As long as Christianity dominated intellectual activity this was not the all-important dichotomy that it became later. The most important issue was the moral one of what we do with our natural faculties. For this the determining polarity is between virtues and vices, and this cross-cuts to some extent the reason – emotion dichotomy. *Superbia* (pride) is a vice of reason as well as an emotion; Aristotelian virtue gives us joy in doing the right thing.³ But this view of the matter changed when moral ascent became identified with the ascent of reason.

Emotions and the Age of Reason

Quite possibly Mr. Spock would have found Benedict Spinoza (1632–1677) and his philosophy the logical development of Medieval rationalism, even though few of the latter's contemporaries might have agreed. Spinoza is of particular interest here, because he not only returns to the Stoic theory of emotions, but amplifies it (Nussbaum 2001: 500–510).

The Medieval efforts to fit a Christian God by stretch of logic into the Aristotelian ontology of substances and accidents, combined with a tendency toward asceticism

²This is not just an angels-on-pins issue. As Shank (1988) demonstrates, the claim that Christian belief required a form of logic inaccessible to non-believers ultimately contributed to the 'Vienna Gesera' of 1420/1421, in which at least 212 Jews were executed and hundreds of others were expelled or committed suicide. Awareness of the dark side of this debate gives us perhaps a greater appreciation for the subsequent exaltation of rationality and its aim of improved tolerance.

³Solomon (2003, chapter 10) makes the mistake of assuming that the Seven Deadly Sins as listed by Pope Gregory I in 590 (lust, gluttony, greed, sloth, wrath, envy, pride) refer entirely or mostly to emotions, because this is what (some of) their names in modern usage seem to imply.

that emphasized a purification of emotions from all earthly desires, seems in hindsight a roadmap toward Spinoza's *Deus sive Natura*. God is now stripped of all anthropomorphic features, and for Spinoza this even includes human-like rationality (Scruton 2002). Instead he is subject to a logic of his own, which is, to use a modern term, the logic of science.

We are supposed to love God, but on the other hand 'God is without passions, neither is he affected by any emotion of pleasure or pain... *Strictly speaking*, God does not love or hate anyone ...' (Ethics 5:17; my emphasis). I have italicized the qualification that indicates that perhaps Spinoza was aware of the difficulty of loving someone (something?) incapable of returning this human love.

The revived notion of reason in opposition to other human faculties leads to an interesting feature in Spinoza's *Tractatus Theologico-Politicus* that supplied the second half of my title: his views on Hebrew prophecy (the following section is based on Steven Nadler 2011: 60–74). Spinoza explicitly contrasts his view on prophecy with that of the twelfth century Jewish scholar Maimonides. In the *Guide for the Perplexed* Maimonides considered what makes a person a prophet. Aside from having the physical ability to get his message across, he must be of exceptional moral stature and austerity. Moreover, his particular gift is that his intellectual excellence 'overflows' into a capacity for imagination that allows him to create 'true stories' to move the people. There is an implied ascent from personal integrity through intellectual capacity to this specific form of prophetic creativity.

Spinoza, however, considered the prophetic imagination as inferior to the rational ability for 'clear and distinct' logical and scientific demonstrations. This ability is just as God-given, on Spinoza's conception of God, as a prophet's imagination. Moreover, what we would call creative intuition, or in Spinoza's terminology 'third kind of knowledge' of the rational individual, is nothing like the imagination that Maimonides imputes to Biblical prophets. The use of imagination by the Biblical prophets is a device necessitated by their inferior rational ability and that of their listeners.

Here a modern view would mostly side with Maimonides (or at least Nadler's perception of his view) rather than Spinoza. Whether Maimonides' picture of the ideal prophet applies to all individuals so called in the Hebrew Bible may be doubtful, but prophetic imagination is clearly something more than simply primitive, prerational intuition. In our day we praise the creative imagination of all sorts of inventors, political visionaries, and so on, and there is no reason to doubt the unity of human imagination. It is not something that is superseded by reason, it is a special talent for applying it to particular, far-reaching problems; in the narrower Biblical sense to problems regarding the moral course of society.

But in Spinoza's view Hebrew prophecy was tainted by both its emotional source in the prophet's imagination and the necessity to evoke emotions in the listeners to make its point. In Nadler's words (2011: 73), 'in Spinoza's view, Maimonides got [it] wrong. You cannot perfect both the intellect and the imagination. The improvement of one necessarily entails the weakening of the other.' Spinoza's disagreement with Maimonides thus exhibits an exaltation of rational analysis at the expense of modes of consciousness that rely ostensibly more on emotional faculties. This picture of something like a see-saw with reason and emotions at either end came to dominate the general perception of the problem for some time, and its aftereffects are still felt today. Stephen Toulmin considers the ideas that 'reason is mental (spiritual), emotion is bodily (carnal)' and that 'emotions frustrate or distort reason' as fundamental presuppositions of the Enlightenment project (Toulmin 1990: 115). This 'hard-line contrast between reason and the emotions' was a 'socially crucial feature of the [Enlightenment] world view that shaped life in Europe on both the social and personal level from the late-17th to the mid-20th century' (p. 134, paraphrase). Although this dualism owes something to the Stoic account of emotions, the progress-oriented and egalitarian goals of Enlightenment are in strong contrast to the elitist *apatheia* of the Stoics. One may, of course, tilt the see-saw the other way, as Romanticism did, but that still means acknowledging the dualism (p. 148).

The Exaltation of Reason and Its Consequences

Given the moral significance of emotions alluded to in the Introduction above, the negative view that Enlightenment philosophers had about them leads directly to an identification of morality with the dominance of reason. We have seen that Medieval theology and philosophy contained a number of elements that limited the exaltation of reason, such as the 'unreasonableness' of God, mysticism, and the role of emotions in virtues and vices. But Enlightenment philosophers leave no doubt that we can think our way to God. For them the question of whether faith is amenable to logic without qualification has been answered affirmatively. As for religious mysticism, it is relegated to the realm of oddities if not despised outright. And a simple see-saw has replaced the subtle interplay of rationality and emotion in the Scholastic view of virtues and vices. All the aspects that had previously worked as a counterbalance to this view have fallen into disrepute by the seventeenth century. Reason has become narrowed to what Toulmin calls 'the calculative idea of rationality' (1990: 115). This is obviously a much narrower conception of rationality than Mary Midgley's view about the 'not really specially rational' Stoic quoted above.

For the Christian believer's struggle with the role of emotions in his or her life the Enlightenment rejection of emotions presents a further problem. To the notion that emotions are useless as a guide in secular life is added the picture of a *de facto* emotionless God largely inherited from the Middle Ages. Reason had traditionally been regarded as God's unique gift to humans. Now this gift becomes seen as being at odds, even in conflict with, our emotional nature. Emotions are thus assimilated to temptation and sinfulness. It is true, of course, that professional theologians have always had a more nuanced view of reason and emotions. Nor was this dualism likely to be consciously articulated in the lives of typical Christian believers. Ordinary life is mostly pragmatic, not philosophical. But the *Zeitgeist* makes itself known in subtle ways. Officially Christianity is not dualistic, but Mary Midgley rightly comments that 'unofficial Christian feeling ... often remained surprisingly Manichaean' (Midgley 1984, chapter 2). This gives us the worst of two different philosophies, since Manichaeism is not only dualistic, but also skeptical about the value of the intellect. Nonetheless Midgley's diagnosis is probably not an unreasonable picture of ordinary people caught between warring religious claims and faced with the resulting loss of a world view based on certainty (Toulmin 1990).

In theology the rejection of Medieval thinking manifested itself as a revival of the views of Augustine who, for reasons entirely different from those of the Enlightenment, also thought that 'emotions frustrate or distort reason.' In Augustine's opinion this was a consequence of original sin. The Catholic Church officially defended its Scholastic tradition against the Augustinian-oriented Reformation, but with regard to original sin the Council of Trent (1545–1563) expressly restated Augustinian theology.⁴ According to Augustine 'the Fall,' the story recounted in Genesis 3 and evidently taken by him as a historical event, changed the entire structure of the world; it introduced not only sin, but pain, sexual desire, and unhappiness (Pagels 1988). This obviously reinforced the picture of a Paradisical state without 'earthly' emotions. Ever since then there has been a lingering suspicion among Christians that having emotions, too, is a disease caught by the Fall. This is one of several sticking points suggesting that the reconciliation of the Edenic myth with evolutionary theory is perhaps not quite as unproblematic as many religious scholars would wish.

There are practical consequences to this sweepingly negative view of emotions. We are, as I suggested in the introduction, often inclined to be suspicious of our own emotions. One reason for this is, as Nussbaum (2001: 12 and *passim*) writes, that they are expressions of our vulnerability and dependency, and we do not like to be reminded of these facets of our existence. If this suspicion of emotions is reinforced rather than allayed by education and the general *Zeitgeist*, persons who absorb this attitude may never come to face their vulnerability and their limits; in other words, they never fully grow up (Nussbaum 2001: 342–350). The following sections discuss resources from both philosophy and spirituality that can potentially counteract these negative consequences, although I will argue that in many cases education and religious formation still suffers from the aftereffects.

Partial and Complete Humans

Mr. Spock and the fictional Vulcans feared emotions because they had led to war. Spinoza was concerned about religious fanaticism and political repression (Nadler 2011). These are concrete instances of the Stoic prejudice that emotions are a hindrance in critical situations, that they always lead us to make bad decisions. But cold rational calculation can do that quite as easily. Any number of wars have been started in this way, too.

⁴*Council of Trent*, session 5, June 17, 1546. The assertion that 'the whole Adam, body and soul, was changed for the worse by the offense of his sin' is taken directly from Augustine.

The exaltation of reason at the expense of emotions as a moral demand has trouble coming to grips with the reality of evil. Identifying pure rationality with moral superiority tends to either trivialize evil or make it incomprehensible. This is the point of Susan Neiman (2002), although her account only starts with the eighteenth century when the initial exaltation of reason was already becoming suspect. The evil genius is not merely a fictional device. Highly intelligent sociopaths are on display in courtrooms with depressing frequency. What they lack is not rationality but the minimum equipment of compassion and what is properly called 'moral sentiment' of normal people.

Fiction has taken this already disturbing picture one step further with the popular and ubiquitous trope of the disembodied brain as the seat of evil. Neiman (2002) dismisses the brain in a vat as a 'pale heir of the devil' (p.10), but it also has a different and more substantive function. It reflects the belief of the authors of these stories, as well as their intended audience, that the rest of the organism is required as well — not just for physical completeness, but more importantly for moral integrity. With the typical delay that separates science from imaginative fiction, psychology has realized this fact under the heading of 'embodied cognition' (e.g. Watts 2013). Progress in neuroscience has made it plausible that there is a bodily counterpart to the picture of a unified mental structure suggested in section "The nature of emotions". Brain and the rest of the body are unified, too, in the way they interact with the world, and emotional responses are not just a contingent but an essential part of this.

In the context of social interactions the concept of the 'empathic brain' and its interaction with the body is particularly relevant (Keysers 2011). Recall Spinoza's view that prophetic reforms are better carried out by communicating clear and distinct ideas rather than instilling compassionate emotions like the Hebrew prophets tried to do. On Nussbaum's view of compassion (2001: 401-454), Spinoza's detached reason simply cannot accomplish what he wants it to do. And this is not because people are not ready to let go of emotions and construct a social system from reason alone, but because a creature such as Homo sapiens will not know how to go about this unless the social goals are also informed by the wisdom of emotions. This is not a plea for replacing reason with emotions, but rather for using all human faculties, giving each their proper place and function, when we think about and strive for the public good. Contrary to what Spinoza thought, 'the good man's being good is a function not of his rationality, but of his participation in the life of fantasy,' as Janik and Toulmin (1973: 198) put it in explicit criticism of nineteenth century dogmatic empiricism. Fantasy here means the ability to imagine situations of moral choice as well as empathy with the needs and desires of fellow humans.

We need both the empathic and the analytical brain to accomplish this. Although the neuroscience behind the empathic brain concept is recent, the controversy over treating reason and emotions as opposite occupants on a see-saw already gained force in the nineteenth century. On the one hand this was the beginning of dogmatic empiricism in science (Janik and Toulmin 1973); on the other hand we have philosophical insights like the one the idiosyncratic Arthur Schopenhauer (1788–1860) expressed in *Die Welt als Wille und Vorstellung*⁵: 'Je höher gesteigert das Bewußtseyn ist, desto deutlicher und zusammenhängender die Gedanken, desto klarer die Anschauungen, desto inniger die Empfindungen' ('The more elevated the consciousness, the more distinct and coherent are the thoughts, the clearer the perceptions, the more heartfelt the emotions.')⁶

Here the whole person reaches a higher level, together with all individual faculties of intellect, perception and emotion. The full significance of the quote becomes apparent against Schopenhauer's generally pessimist philosophy.⁷ He agreed with Spinoza on the deterministic nature of the world (although he would have found the word 'God' abhorrent), and added to this nature's general hostility toward human ambitions. Nonetheless he thought that we can rise above the blind forces of nature at certain exceptional instants of 'besseres Bewußtsein,' better consciousness (Safranski 1987). But the latter is not a function of superior rationality, nor of intellectual effort, unlike the ordinary empirical consciousness of science (ibid. p. 297– 300). It is rather like the illumination of yogis and Eastern mystics, whom Schopenhauer preferred over their Christian counterparts.

Mary Midgley, not fatalistic about the blindness of nature and more egalitarian than Schopenhauer, points to the fact that we use all of these faculties to varying extent in everyday decisions about ordinary life (Midgley 2003, especially chapters 1 and 6). This tension between a particular 'higher' or 'more purified' state of consciousness and our everyday notions, and particularly the role of emotions with regard to this tension, is the subject of the next section. First, in order to clear up a point of terminology, we must return to and expand on the grammatical issue alluded to in the section on Divine Emotions.

Schopenhauer refers to faculties that all exist as plurals by their very nature: perceptions, thoughts, emotions. The container, so to speak, he calls consciousness, because in this particular case he wants to emphasize the increased awareness of them that goes with being elevated (*gesteigert*, i.e., 'intensified'). But we know, and not just since Freud, that there are many similar things of which we are not or only partly aware, so perhaps mind would be a more general concept that we need for further discussion.

Iris Murdoch (1992, chapter 8) considers what we come across, as it were, in our minds by introspection, and discusses Hegel's metaphor of a 'bag.' For the sake of sanity, its contents have to be in some sort of order, however incomplete, and Mary

⁵The title is variously translated 'The World as Will and Representation,' as '...Will and Idea,' as '...Will and Presentation,' or perhaps most plausibly as '...Will and Imagination.' It is confusingly subdivided into a volume I consisting of 4 Books (published 1819), and a volume II (1844) with comments and supplements to the books of the first volume in 50 chapters.

⁶*Die Welt als Wille und Vorstellung*, 3rd enlarged edition of 1859, volume II, chapter 22 (supplement to the 2nd book of volume I), electronic adaptation by Carl W. Zegner (2012), page 1642 (my translation). This is quoted more extensively (with a somewhat different translation) in Murdoch (1992: 251).

⁷Neiman (2002) overstates his pessimism, Murdoch (1992) more or less denies it. With Schopenhauer it is sometimes difficult to separate rhetorical drama from considered opinion (Safranski 1987).

Midgley proposes the Kantian term 'practical reason' for the ordering principle (she particularly defends this usage in Midgley 2003: 88–118). This reason, like consciousness and mind, comes as singular for each individual (the alternative would be stark madness), which ought to have already made us aware that it does not occupy the same playground as the plural items inside of it. If reason is privileged, it is because it is the containment and ordering principle, not as the weightier partner on a see-saw. And its major business is to interact with the world, in which things like facts and events also exist as necessary plurals.

All the things that make up the 'inside of the bag' are partly but not fully under voluntary control, and emotions are no exceptions. In fact emotions are in this respect rather like perceptions; for example, we can look this way rather than that, but do not control what we see, yet can pay more attention to one thing rather than another, can be deceived about what we see, etc. With regard to emotions, some things are conceptually 'walled off' from each other. Suppose, writes Solomon (2003, chapter 1) that you had slept badly and got angry at a co-worker over some triviality. You are perfectly well aware of the bad sleep, but while you are angry you cannot be aware that this is the 'real' cause of anger. Once you do become aware of it, the anger vanishes, perhaps in Cheshire-cat fashion leaving a lingering resentment for a while, but no longer as a proper emotion. A different reason why something may be hidden from awareness is self-deception, which the next sections deal with.

Metaphors of Improvement

Once we take leave of the see-saw whereby improving our reasoning requires scorning emotions, or vice versa, we have to consider what it means to elevate both ideally as a moral as well as intellectual improvement of the whole person. Such personal development is usually expressed in metaphors that imply a direction (out of Plato's cave, for example) or clarification (as in Descartes attaining clear and distinct concepts). Although the whole person is always implied, the particular focus of the metaphor can be more specific, referring to intellectual, spiritual, moral, etc., ascent. Nussbaum (2001) spends more than a third of her book on emotions on The Ascent of Love in its many forms. This focus works if the subject is taken in a broad sense, for example in the case of Plato for whom eros is the general internal energy of life that moves and motivates everything. As Nussbaum describes love's ascent according to various world views (Platonic, Christian, etc.) she expresses concern whether at the end of all the ascending and purifying 'what is left at the end still contains what was originally valuable and wonderful in love, whether it is ... still love at all' (Nussbaum 2001: 469). She assesses this by three normative criteria which, from a modern point of view, we would regard as indispensable aspects of moral improvement: whether the prescribed path (1) fosters social compassion, (2) reciprocity in relationships, and (3) allows individuality to develop (pp. 478-481). She claims, for example, that the Platonic lover 'has climbed too high out of reach of human imperfection, and therefore out of reach...' of the normative goals her criteria prescribe. The metaphor of altitude is compelling here, and we might extend it to ask whether the heavenward orientation of early Christianity, influenced by Platonism, has a similar tendency.

The Platonic ascent of love takes as its object not the person as he or she is, but rather the absolute good insofar as it is instantiated in the person. Thus Platonic love ultimately treats other persons as means for one's own ascent rather than loving them for who they are (Nussbaum 2001: 482–500). Nussbaum quotes Gregory Vlastos as saying that Christianity has overcome this 'spiritualized egocentrism' (p. 498). This is clearly true in a theoretical sense, but all too often forgotten in practice. How often have we heard from pious Christians that the ultimate, perhaps even the sole purpose of human life is 'to go to heaven'? Whatever else can that mean but that we must treat other humans with benevolence, not because we love them as they are, but because loving them is a means for this ultimate goal? Of course the practice of truly compassionate people comes from their moral goodness, whether they are Platonists, Christians, or anything else. This is the point of Nussbaum's criterion of reciprocity. It is plain human goodness not to treat others as means to an end, whether this end is financial gain or going to heaven. But Christian preaching has not always made that as clear as it might have, and the history of how emotions have been viewed has much to do with that.

Because of this situation metaphors like ascent, purification, etc., are today often treated with suspicion. We tend to be skeptical of those who see themselves as more elevated or purer than others. On the other hand we probably cannot do without metaphors of such immediacy and power. Perhaps their fate in the history of science can give us a hint. The evolution of organisms is no longer a slender and tall 'tree of life,' with us humans on the top, but more of a bush (Stephen J. Gould's favorite metaphor). What branches look close to each other in a bush depends on perspective, which accords well with the fact that different criteria give us different taxonomies of organisms. Likewise, since the age of alchemy we have learned that there is no such thing as a perfectly pure substance. Purity is relative to purpose; distilled water is not all that healthy to drink. Translated to personal life, excellence in one area does not elevate one over one's fellow humans in every other respect as well.

Of course we do not want to lose sight of the essential fact that humans need and are capable of moral improvement, but we do not necessarily need to gain altitude for this. Ascending can make it too easy to look down on our fellow humans. John Bunyan's pilgrims are progressing, not exactly over level ground, but the celestial terminus is in the afterlife, not here on earth. Schopenhauer, who did not believe in an afterlife, stays away from ascent metaphors altogether (the use of 'elevated' in the above quote merely reflects a grammatical comparative in German). His 'better consciousness' is exploring profound depths, not heights, of reality, metaphorically as the inner space of a sphere of which empirical consciousness can merely explore the surface (Safranski 1987: 297).

Mary Midgley's moral philosophy, too, stays mostly terrestrial. She emphasizes the ways in which the mental tidbits of the Hegelian 'bag' of our mind interact, and how practical reason orchestrates morally appropriate responses. This is sometimes difficult: 'We spend a lot of time and ingenuity on developing ways of organizing the inner crowd, securing consent among it, and arranging for it to act as a whole' (Midgley 1984: 126). Significantly she takes for granted the cognitive view of emotions that Nussbaum, Solomon, and others defend. She 'object[s] to systematic humbug' (Midgley 2003, chapter 6) on the grounds that normally right action has to be done from the right motives, and these are, again normally, undergirded by the appropriate emotions. Even disgust, which Nussbaum regards as generally a bad influence on personal and political decision making, has its proper place in Midgley's view: 'We cannot think injustice bad if it does not at some point sicken us' (Midgley 2003: 107). We recognize and appreciate the good or moral person, not by the absence or suppression of such emotions, but by their rightness, fitting the circumstances, being appropriate to the situation. This means that beyond the first reaction, when emotions arise unbidden and involuntarily, we really do have partial control over them, not merely to suppress, but to steer them in the right direction. This can be indirect, by putting ourselves into situations that will elicit a response we anticipate, or direct by talking ourselves into (or out of) a particular frame of mind. The next section mentions a recipe for how to do this.

When it comes to judging what emotions are appropriate, there is however a danger that is almost invariably underestimated, namely telling others how they ought to feel, either as individual advice or through social expectations. Scrutton confronts this directly: The fact that we are responsible for how we nurture and direct our emotions, she writes, 'does not... entail that we hold the related view that blame is an appropriate response to someone having emotions we deem to be morally questionable' (Scrutton 2011: 143). In some ways this is just a special case of refraining from moral judgments about other people on insufficient and unavailable information. But with regard to judging someone else's emotions this restraint of judgment is especially important, just because emotions come in such a wide range within the spectrum of what is voluntary or involuntary, and we rarely have sufficient information about another person to judge fairly. Although normally actions should be backed by appropriate emotions, judging people for their emotions is very different from judging them for their actions. One reason is the conceptual difference between first-person and third-person evaluation of emotions (Solomon 2003, chapter 1) illustrated by the 'real cause of anger' at the end of the previous section.

Dorothy Sayers gives us an excellent fictional example. The main character of her novel *Gaudy Night*, Harriet Vane, is warned 'not to try to persuade [her]self into appropriate feeling' (Gaudy Night, chapter 2). The circumstances of the persuading here are different from Midgley's case in that it refers not to Harriet's own moral will, but to the social pressures that would tell her how she ought to feel. She had fallen into the trap of telling herself, 'I am expected to feel that way... I really ought to feel that way... I do feel that way, don't I?,' and as a result had 'mistake[n] the will to feel for the feeling itself'. Midgley recognizes a similar problem, warning that acting in a particular way because we are expected so to act, but without attending to and nurturing the underlying feeling, 'carries the strong danger of self-deception endemic to all high spiritual pretensions' (Midgley 2003: 116). There is a

sliding scale from calculated hypocrisy at one end to complete, blissful selfdeception at the other.

I do not think it is far-fetched to say that this is how 'love your neighbor' and assorted other religious precepts sometimes affect people, nor do I think that there is enough attention given to counteracting the problem. In fact pressure to feel a certain way only adds guilt over the absent feeling to the self-deception, and constant guilt opens the door to being manipulated. There are other moral objections to unspecified guilt as well, which are discussed in the final section. But before this we will briefly return to the sixteenth century for spiritual advice from the Christian tradition that values emotions as an essential and helpful part in spiritual life.

Traditional Spiritual Resources

In section "Divine emotions", I suggested that mysticism was one of the factors that balanced rationalism in Medieval Christianity. If this had just affected the private spirituality of a few particularly saintly individuals, this would not have had much effect. But many of these same individuals, like Meister Eckard, Theresa of Avila, John of the Cross, and many others, were also teachers and writers who knew that their experiences were important to ordinary people.

Among the spiritual writers I focus here on Ignatius of Loyola (1491–1556), the founder of the religious order known as Jesuits.⁸ This choice is motivated by the particular attention that he paid to emotions in his spiritual advice. There is a tradition that not only has kept his advice and guidance alive, but has tried to update it and adapt it to modern life in ways that seek to be true to his intent. One overall theme emerging from this will be that one need not be an ecstatic mystic to put emotions to good use in one's spiritual life.

Most of the direct advice comes from the *Spiritual Exercises*, laid down in book form in 1548. However, the book is written as a manual for spiritual directors, with the intent that the exercises are made under this person's guidance, not by reading the book.⁹ As one would expect from 500-year-old ideas, there are many things in Ignatius that need, and have received, critical rethinking in light of what we have learned about human nature and psychology since the sixteenth century. His view of emotions is not one of them. In fact quite the reverse: some contemporary philosophers and psychologists could profitably rethink their own theories about emotions in light of how Ignatius puts them to good use.

A fundamental goal of Ignatian spirituality is detachment from worldly concerns. At first glance this looks very much like Stoic *apatheia*, and clearly what underlies his treatment of emotions is a cognitive view similar to the Stoic one. But instead of

⁸I am particularly grateful to two friends, John Donaghy and Betty Clermont, who independently of each other suggested to me that Ignatius is an important part of this story.

⁹There are however many 'companion' books available, some of which are listed at the end of Martin (2010) in the section *For Further Exploration*.

suppressing them Ignatius encourages us to make emotions and imagination integral parts of our spiritual life. To begin with, we can interrogate our emotions, ask why we have them and what they are telling us. In our time the question, 'how do you feel about this?' has become rather an annoying cliché. But to Ignatius it is a profound inquiry that can be the beginning of a spiritual journey. For this we must, of course, try to be honest with ourselves and refrain from exactly the kind of self-reproach that we encountered in the preceding section, namely that we 'ought to' have different emotions from the ones we do have. In that way we can learn how particular emotions are connected with events in our lives, decisions that we have to make, and so on.

Ignatius thinks that emotions are, on the whole and subject to the uncertainty of all human endeavors, reliable judgments about these things. This is as far away from a Stoic view as one can possibly get. It is also valuable contemporary advice, whether phrased in religious or secular terms. But we do have to learn how to deal with emotions appropriately. For this goal imagination is especially helpful. Ignatius encourages us to imagine situations, in the *Exercises* mostly events narrated in the gospels, and to engage them by imagining ourselves in that place. Not just specially gifted prophets, as in Maimonides' view, but everyone can be inspired by God through imagination. How this works and how such contemplative techniques may today be affected by the ubiquity of the media would here take us too far afield. A realistic contemporary explanation can be found in Martin (2010).

Some items in our 'mental bag,' Ignatius believes, come from God, others from our own selfishness or perhaps demonic whisperings. We can learn to tell the difference by a 'discernment of spirits,' an old term in Christian spirituality, but used as a central concept by Ignatius. And the whole process of orienting our life in the right way, for which his *Exercises* are intended, will have the result that our emotions can help us to make the right decisions. The Jesuit psychoanalyst William W. Meissner summarizes Ignatius' view of how emotions fit into the process of discernment: 'Influences from God are marked by ... increased faith, hope, love, humility, and peace. Influences that derive from internal drives, conflicts, or frustrated desire leave the subject feeling arid, empty, frustrated, anxious, and experiencing ... pride, narcissistic enhancement, shame, guilt, or bitterness' (Meissner 1992: 317).

This relies on what Solomon (2003, chapter 10) would call a meta-appraisal, the 'reflective evaluation of emotions' as distinct from appraisals (judgments) that constitute emotions. In this case the meta-appraisal is the judgment that the emotions associated with considering alternatives are fairly reliable guides to moral choice. Which choice elicits the more positive emotions when we consider it will (usually) be the right one. Ignatius was realistic enough to know that this guide to discernment of spirits does not work with the reliability of a chemical reagent. He was too aware of human frailty to believe otherwise. But then nothing in psychology or social science is as simple as using a piece of litmus paper, even with today's much greater knowledge.

Meissner's second, 'negative' list is noteworthy for its similarity to Nussbaum's characterization of immaturity. Anxiety, narcissism, and 'primitive shame' are infantile characteristics that are outgrown in the course of healthy emotional development (Nussbaum 2001: 190–229). Therefore discernment is, in this view, a way to adult decision-making.

There is a caveat. What elicits positive emotions is partly a matter of social values that the individual has internalized. In the sixteenth century a world view about which thoughts and emotions either came from God or from a less reputable source was probably widely accepted, at least among the people for whom the Exercises are intended. Ignatius also writes with a situation in mind where a spiritual director is involved to provide course corrections, so that the exercising individual will keep the goal in view.

In making this way of thinking more relevant for the present discussion we are greatly helped by the fact that Ignatius himself keeps pointing out that his advice must be adapted to the specific needs of the individual. It has thus been possible (though not always easy) to maintain a tradition that has constantly updated and adapted Ignatian spirituality over the centuries. Ignatius phrased this of course in a traditional theistic way. Not only reason but our emotional nature as well is a gift from God, so we had better use it. But if that is the case, then it is dead wrong to think that all emotions that are not oriented toward the afterlife are simply degradations of human nature due to the Fall. We do not use our reason in this exclusively otherworldly way either. We better rethink the problems raised by the conflict between reason and emotions in light of this insight.

What if we go beyond Ignatius' traditional theism? Today many people have internalized ideals other than a traditional God. Most of these ideals are abstract rather than personal and could not be 'sources' in the sense in which Ignatius thinks of God as the source of some emotions, but not of others. It would be possible to recast discernment in a non-theistic way, but this requires a separate study. In any case, Ignatius' views on the moral usefulness of emotions should be interesting to moral philosophy beyond its application within Christian spirituality.

It is useful to compare this spiritual goal to the ascent metaphor mentioned previously. We should note the difference between the progression of the *Exercises*, intended as a retreat of limited time, and the life-long ascent that Nussbaum has in mind when she writes about the advice to lovers from Plato, Spinoza, Augustine, Dante, etc. (Nussbaum 2001, part III). Just like the exercising of an athlete, a retreat is not an end in itself, but a learning experience for the purpose of returning 'down to earth' and to a practical life. If we are ascending at all, it is not in order to leave earthly concerns behind altogether, but in order to establish 'detached' priorities in dealing with them. One might say that Ignatius combines what is useful in the 'ascent' tradition with the everyday wisdom of Midgley and other earthbound moral thinkers.

The Moral of the Story

The history of distrust regarding emotions is even today making it difficult to achieve the healthy balance that characterizes what I have called a complete person, in spite of the philosophical developments and spiritual resources that seek to counteract the see-saw attitude. Maybe it has been difficult at any time. Here I am particularly concerned how this difficulty affects religion in general and spiritual formation in particular. To recapitulate the convergence of three historic influences that have all denigrated the importance of emotions for Christianity: First, there is a lasting influence of classic Stoicism, however indirect, present in traditions going back to earliest Christian times. Second, there has been a trend of de-emotionalizing God to the point that divine love, although always acknowledged, can no longer be understood on an analogy of human love $(er\bar{o}s)$. Third, a different cause for scorning emotions arose with the exaltation of rationality in Enlightenment. There are many areas where these anti-emotion traditions stand in the way of fostering and encouraging personal integration and completeness, and I want to conclude with pointing to some potential problems that require theological analysis and rethinking.

Emotions are not something that we have unfortunately come down with as a result of 'the Fall,' they are an integral part of who we are. There is evolutionary continuity from the cognitive faculties and emotions of higher animals to intellectual development and human self-awareness. Yet the long tradition of seeing the latter, but not the former, as God's gift that takes us above the animals, can become quite misleading. Situations where we do not like our initial emotions are disturbing, especially if they persist, but they are not a sign that there is something wrong with one's personality, nor should they be *prima facie* treated as indicators of human sinfulness.

Several things follow from this. It is important to acknowledge emotions before judging them, both in ourselves and others. Emotions are judgments, and as such they may be more or less correct, or they may be completely mistaken, but they can not in themselves be morally wrong unless they already arise from a background of bad faith (as in 'I was prepared to dislike him and my preparations were successful').

If emotions are judgments 'appraising objects as salient for our own well-being' (Nussbaum), but can also sometimes mislead us, we have to learn how to listen to them and when to rely on them: in a word we have to learn discernment (and not just in a religious sense). To this end honesty is important, which is difficult for several reasons. There may be outside pressures to, in Sayers' terminology, 'persuade one-self into appropriate feelings,' but more often it is a 'will to feel' that is motivated by already internalized expectations, principles and goals. Since this internalization starts at birth, we need to pay particular attention to childhood and the process of growing up (the following draws particularly on Nussbaum 2001, chapter 4 'Emotions and Infancy').

To become a healthy adult a child must grow out of emotions that are merely a developmental phase: primitive shame and guilt, childish attachment, self-centeredness. This process of 'growing out of' as well as growing up can be helped or hindered, especially through interaction with authority figures. A person growing up with a sense of never being good enough can partially retain the childish features and never fully grow up emotionally. Nussbaum cites an extreme example with pathological consequences (p. 193–198). The implications for the image of God that is presented to a child during the growing up process are immediately obvious.

The retention of childish guilt beyond the age where this is a natural transient phase is morally disastrous. Unspecific guilt makes a person susceptible to manipulation. Being open to manipulation is objectionable in and of itself even if the manipulation does not happen. But there are even more serious moral objections. Mary Midgley quotes Hannah Arendt: 'morally speaking, it is hardly less wrong to feel guilty without having done something specific than it is to feel free of all guilt if one is actually guilty of something' (Midgley 1984: 52).

Guilt over not feeling what one is expected to feel fosters the self-deception we have encountered in section "Metaphors of improvement", and this in turn blocks the honest appraisal of our emotions necessary for making use of them in spiritual growth. On an interpersonal level the retention of anxiety, narcissism, and primitive shame becomes, as Nussbaum (2001: 342–350) argues, an impediment to compassion in adulthood. Since she also considers compassion necessary for justice (ibid., chapter 8, 'Compassion and Public Life'), this becomes a wider social problem. At the same time we also realize that incompetent religious instruction, or spiritual direction gone wrong, has frequently promoted exactly these infantile characteristics. In this case lack of compassion is typically manifested as excessive doctrinal rigidity. Persons can grow up to become obsessive rule-followers instead of morally mature individuals. Moreover this can combine with the self-deception that unjust treatment of others is 'for their own good.'

The main source of these failures is a general sense that as a result of original sin all members of the human race are equally wretched in the eyes of God. Setting aside that claiming to look through God's eyes is probably an act of hybris, there are several objection to this. Nussbaum protests, with explicit reference to Augustine: 'It seems wrong to equate all humans in their sinfulness, and wrong to base social relations on equal sinfulness. There is ... too much abjectness in this, too much unwillingness to grant ... that there is all the world of difference between the evil and the good' (Nussbaum 2001: 550). Appraising every minor lapse as a slippery slope to perdition is not an incentive to make us more virtuous, but actually trivializes evil. This too is a form of self-deception. As much as we have to guard against bad habits slipping into persisting vice, there is still a conceptual difference and not just one of degree between our everyday failings and calculated evil. Being in a permanent state of guilt over our own sinfulness makes us lose sight of this difference. Thus guilt is an emotion that requires a meta-appraisal: asking whether it is justified, and if it is not, talking ourselves out of it.

Many spiritual writers of past ages have known this, but perhaps it is time to reconcile their wisdom with insights from psychology and sociology. This is not easy. Sometimes the insights seem to be expressed in different languages, and adequate translators are needed who are trained in both fields. But there may also be justified differences of opinion about what is involved in becoming a complete person, how to foster the process, and how to become open to the wisdom of emotions. These need to be honestly discussed.

Nonetheless I think we can reach agreement that even in the face of the very complicated and detailed arguments of biology, psychology, philosophy, and all the rest, it is not all that difficult to arrive at some common sense apprehension of what emotions are like and what role they should play in our lives. Ideally we should attain a good measure of confidence in our own common sense and moral intuitions.

At the same time we need to remain open to new information as well as learning from personal experience, not just intellectually but emotionally as well.

Bibliography

- Baltzly, D. (2014). 'Stoicism,' In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy* (Spring 2014 Edition), URL = http://plato.stanford.edu/archives/spr2014/entries/stoicism/. Accessed 26 June 2014.
- Barad, J., & Robertson, E. (2000). The ethics of Star Trek. New York: Harper Collins.
- Braitenberg, V. (1984). Vehicles: Experiments in synthetic psychology. Cambridge, MA: MIT Press.
- Janik, A., & Toulmin, S. (1973). Wittgenstein's Vienna. New York: Simon & Schuster.
- Keysers, C. (2011). The empathic brain. Social Brain Press (e-book).
- Kracher, A. (2002). Imposing order The varieties of anthropomorphism. *Studies in Science and Theology*, 8, 239–261.
- Kracher, A. (2006). Meta-humans and metanoia: The moral dimension of extraterrestrials. *Zygon*, *41*, 329–346.
- Lorenz, K. (1963). Das sogenannte Böse. Vienna: Borotha-Schöler.
- Martin, J. (2010). The Jesuit guide to (almost) everything. San Francisco: HarperOne.
- Meissner, W. W. (1992). Ignatius of Loyola. New Haven: Yale University Press.
- Midgley, M. (1984). Wickedness A philosophical essay. London: Routledge.
- Midgley, M. (2003). Heart and mind (2nd Rev. ed.). London: Routledge Classics.
- Midgley, M. (2010). The solitary self. Durham: Acumen Publishing.
- Murdoch, I. (1992). Metaphysics as a guide to morals. London: Chatto and Windus.
- Nadler, S. (2011). A book forged in hell. Princeton: Princeton University Press.
- Neiman, S. (2002). Evil in modern thought. Princeton: Princeton University Press.
- Nussbaum, M. (2001). Upheavals of thought. Cambridge: Cambridge University Press.
- Pagels, E. (1988). Adam, Eve, and the serpent. New York: Random House.
- Safranski, R. (1987). Schopenhauer und die wilden Jahre der Philosophie. München: Carl Hanser Verlag.
- Scruton, R. (2002). Spinoza (Rev. ed.). Oxford: Oxford University Press.
- Scrutton, A. P. (2011). Thinking through feeling. London: Continuum International.
- Shank, M. H. (1988). Unless you believe, you shall not understand. Princeton: Princeton University Press.
- Solomon, R. C. (2003). Not passion's slave. New York: Oxford University Press.
- Toulmin, S. (1990). Cosmopolis The hidden agenda of modernity. New York: Free Press.
- Watts, F. (2013). Embodied cognition and religion. Zygon, 48, 745-758.

Alfred Kracher was born in Vienna, Austria, where he obtained a Ph.D. in chemistry. Until his retirement in 2010 he was staff scientist at Iowa State University in Ames, Iowa. In addition to his scientific work in cosmochemistry and materials science he has written papers and articles on the wider social implications of science, the search for extraterrestrial intelligence, and the relationship of science and religion. He has contributed to several previous ESSSAT conferences and the publications resulting from them. He is also on the editorial board of the European Journal of Science and Theology.

Chapter 20 Can Reason Be Emotional?

Zbigniew Liana

Abstract This paper deals with the problem of the theoretical relationship between concepts of reason and emotion. The main perspective of the paper is on the contemporary debate in the philosophy of science regarding the rationality of science and the role of emotions and other extrarational causes in explaining science and reason as such. The main purpose of the paper is to present a possible third way, a way of superseding an obvious and traditional dualism underlying these debates the dualism of reason and emotion. Two main heuristics are used in the paper. The first consists in relating epistemological problems to common language experience, in order to validate or refute them. The second consists in tracking a common root of both parts of the epistemological dualism in philosophy of science. A proposal for superseding this dualism is put forward, based on the thoughts of Joseph Życiński. The proposal is then (in the last two sections) confronted with an example, proposed by LeDoux, of the empirical interpretation of the 'reality' of emotions in neurosciences. The pivotal role of the common language experience is thus confirmed. All this leads to the conclusion that the possibility of theoretically relating reason and emotions is not only a purely linguistic (analytical) game, but also an answer to a 'real' problem.

Keywords Rationalism • Skepticism • Common language • Philosophical explanation • Empirical method • Causal explanation of knowledge • Naturalization of epistemological problems

0. *Reason* and *emotion* are words that appear not only in common language but also in philosophical language. Different kinds of language change not only their meaning but also their cognitive function. The meaning of the question raised in the title is also language-dependent. In this paper I will try to investigate both meanings of this question in order to establish the real problem concealed behind it. I will try also to present a possible non-trivial answer to this question proposed by J. Życiński.

Z. Liana (🖂)

Pontifical University of John Paul II and Copernicus Center for Interdisciplinary Studies, Kraków, Poland e-mail: atliana@cyf-kr.edu.pl

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_20

Finally I will give an example of a heuristic procedure used in the empirical sciences for adapting these common linguistic and philosophical concepts to the empirical method. I will investigate also the relationship between these three levels of language in order to understand their respective input into the answer to the question raised in the title.

1. In our common language both the words *reason* and *emotion* are equally necessary to articulate our self-experience.¹ They are intended to name two different kinds of intuitions of self-understanding. When reflecting upon our behavior we see in our (re)actions two different tendencies: spontaneity, involving our body and its feelings, and thoughtful reflection. The former means directness, lack of any conscious distance or intermediary between us and the object: the latter involves a temporal and 'emotional' distance between us and the object. Reflection eliminates or diminishes the spontaneity of our (re)actions. In doing so it introduces (or discovers) order and constraints into the set of otherwise purely causal and unconscious relationships between ourselves and objects.² It seems that the common term *emotion* (or *feeling, passion, affect* and similar) is primarily intended to name our spontaneous (re)actions or states of mind and body. Contrarily, the common term *reason* (or its equivalents) is intended to name our reflected-upon and consciously (mentally and linguistically) ordered relationship towards the world, especially our knowledge of the world.

From the point of view of common language, whose meaning is mostly empirical and referential, the answer to the question raised in the title is quite trivial: Yes, of course! Common language is intended to describe or to name our common experience, to name what we take as a fact or state of affairs. Our self-observation or the observation of other people shows us that our (re)actions are usually both *emotional* and rational in the above explained sense. Emotions and reason, although different, usually come about together. These two aspects of our everyday behavior are entangled and intertwined. Frequently emotions like anger or love are said to hamper the rationality not only of our behavior, but also of our knowledge of facts. On the other hand rational behavior, especially when it is successful, can become a source of happiness or joy. Scientific discoveries, or mathematical analyses, are accompanied by emotional states that can strongly motivate further research or lead to an emotionally tinged contemplation of the world or rational structures. Still another example of the intricate way reason and emotions come along together can be found in the words of Pascal: 'The heart has its reasons, which reason does not understand' (2010, thought 277). With these words Pascal intended to criticize the traditional philosophical dualistic distinction between reason and emotion (heart), and to show

¹What is said about self-experience can equally be said about the experience of other people and of other biological species. No self-experience of what is called *reason* or *emotion* would (probably) be possible without a comparative experience of other people and of other species. However, this paper is not intended to discuss the psychological origins of the concepts of *reason* and *emotion* but only to present the basic meaning (referential, objective) and intuitions underlying those concepts.

 $^{^{2}}$ The dualistic distinction *ourselves – objects* is itself a result of self-reflection and of the mental and linguistic ordering of our self-experience.

that it was inadequate to express the complicated relationship of these two aspects of our cognitive behavior.

Because our actual reason (rational behavior) *is* factually emotional, in that common, empirical sense it *can be* emotional. But this answer is cognitively trivial because it does not explain anything. It gives us nothing more than a common language observational statement. The problem remains of what exactly these two aspects are and how they relate. Common language terms and observations cannot solve it. This is where theoretical philosophy and philosophical language come in.

2. Philosophical language, even if it often uses words taken from common language, usually changes their meaning in order to make it more precise and theoretically useable. This new meaning is a part of the whole theoretical structure constructed to explain facts and (intuitional) problems expressed in common language. Empirically referential words in common language are changed into theoretical or metaphysical terms, no longer designating empirical states of affairs or qualities but abstract and postulated unobserved entities.

This was certainly the fate of *reason*. In ancient Greece *logos* or *nous* became words designating an unobservable principle or faculty of our rational behavior (cognition, knowledge). Their meaning incorporated intuitions of *universality*, *necessity* and *rule-following* (*order*). From the beginning they were defined within a dualistic perspective: the realm of reason is essentially different from the realm of sensible matter. The principle of reason became a kind of a divine element within both the world and our human nature (soul). Human reason became a faculty that enabled human beings to reach the realm of the divine, eternal and unchangeable *logos* or rationality hidden behind changeable aspects of the sensible world.

This philosophical concept has undergone many changes together with changing theoretical explanations of human rationality and knowledge. Notwithstanding this, universality, necessity and rule-following remained characteristic features of almost all these explanations. It seems that the only important change in the meaning of philosophical *reason* can be found within the anti-psychological movement in epistemology. The idea of reason as a faculty of knowing, strongly related to the idea of the individual cognitive consciousness, was rejected as purely psychological and empirical, inconsistent with ideas of universality, necessity and rule-following. Within this anti-psychological tendency *reason* became synonymous with intersubjective (i.e. objective) *knowledge, science, language* or *thought*. Instead of investigating the unclear metaphysical notion of universal reason it was preferable to restrict philosophical research to the field of easily observable rational behavior (methods) and rational effects (theories).

The concept of emotion has its own philosophical history, although it did not receive as much theoretical weight as the concept of reason (see Dębiec 2014). This was probably because it was strongly related to subjective and sensible aspects of our behavior, as in Aristotle, for whom emotions were only kinds of *pathos* (affection), sensible accidents or sensible accidental properties of an individual substance (subject). For centuries philosophy was interested mostly in the universal and in the necessary (see Aristotle 1994, term *pathos*; see also Lalande 1985, term *affection*).

So, in philosophical language *reason* and *emotion* became expressions of a dualistic explanation of the human behavior. They became synonyms of two opposite principles: the principle of objectivity and the principle of subjectivity.

From this point of view the answer to the question raised in the title must be negative: *No, of course! Reason* and *emotions* are two different beings. Although they can occur together in our everyday life, they refer to two completely different and opposite principles of human behavior. Emotions are negligible or eliminable, in principle, in the context of our using our reason.

But this answer is also cognitively trivial. The positive, common language answer – *Yes, of course*! – is trivial because it communicates nothing more than everyday life observations. This negative, philosophical answer is trivial because it simply follows deductively from (implicit or explicit) definitions of the philosophical terms. It delivers nothing more than can be found in the respective definitions of terms. Theoretically non-trivial answers should be explanations, and not deductive conclusions. They should be answers to questions articulating real (objective) philosophical problems and not to questions concerning meanings of words.³

3. Is there any real philosophical problem lying behind the question in the title? According to many philosophers it is the problem with explaining *science* (*reason*) within a dualistic meta-epistemological framework.

Joseph Życiński (1988: 7 ff.) points out that the Scientific Revolution that happened at the beginning of the Twentieth Century has deeply undermined the Modern understanding of reason as incarnated in empirical science. To the great surprise of philosophers, the revolution has shown not only that scientific theories change with time – this metascientific fact was well known as early as in the nineteenth century – but also that so do the metascientific criteria of *being science* or of *being scientific*. Philosophers were constrained to redefine their ideas concerning the scientific method and concerning epistemic values standing for criteria of scientificity and rationality as well.

The scientific revolution resulted in a metascientific revolution in the philosophy of science and of rationality. (I borrow the idea of a metascientific revolution from Joseph Życiński (1988)). *Reason* or *rationality*, as disclosed by empirical science, was now seen to be time and context-dependent. The crucial philosophical problem to be solved was the role played by the traditionally extrarational or arational elements or factors, like emotions, both in real science and their relationship to *rationality (reason)* itself. In the face of the new meta-scientific facts falsifying traditional rationalistic theories of science based on the strong dualism *rational* vs *extra-rational (reason vs emotions)*, philosophers were constrained to find new philosophical explanations of *science* and *reason*.

According to Życiński this metascientific revolution in philosophy went in two opposite directions, called respectively *internalism* and *externalism*.

Internalism was trying to keep the traditional dualistic vision of rationality by explaining the development of science with purely internal, i.e. rational, elements:

³In this respect I follow the meta-philosophical position of Karl Popper, who denied any methodological importance to the logical analysis of language in solving real problems in philosophy.

reasons, premises, rules, criteria, methodological decisions, etc. New rationalists were hoping to find new paradigms of rationality immune to historical changes or capable of rationalizing the idea of scientific change itself. The proponents of different forms of formalism, heirs of the formalistic ideas of Kant, believed that the most accurate expression of *reason* was a logical form of knowledge, and that the logical analysis of knowledge would be sufficient to distinguish between science (*reason*) and non-science (*non-reason*). From this formalistic perspective there was no place for extrarational elements like emotions in science properly understood. Also, for a less formalistic epistemologist, like Popper, equating *rationality* or *scientificity* (*Wissenschaftlichkeit*) with *method of justification* situated emotions outside the realm of *true* or *genuine science* (*reason*). Extrarational, causal factors can explain the way new theories are *discovered*, but not how they are *justified*.

In order to explain this dualism theoretically, internalism introduced the distinction of two contexts: the context of discovery and the context of justification. The former is subjective, (partially) irrational, and hence unimportant for our understanding of *true reason* and *science*,⁴ the latter is governed by objective, purely rational rules for methodological decisions, such as choosing a better theory. The rational ideal of a scientific or objective attitude consists in eliminating any trace of subjective, intuitive and emotional input from justification procedures and methodological choices.⁵

This optimistic, purely rational vision of science and of the scientific enterprise was heavily disturbed by results from studies in the history of science. In real science causal (non-rational) factors do sometimes play an important role in the context of justification and acceptance. Quite often it happens that scientists have to choose between two empirically equivalent theories. In these cases choices are done on other than purely rational grounds. Analogous situations occur when scientists change their methodological attitude toward theories without having any rational grounds (like changes in the explanatory power of the theory, or appearance of new facts: see for example Życiński 1988: 9). The rationalistic division between the irrational context of discovery and the rational context of justification does not explain real science, or at least this explanation does not adequately fit with historical data.

The inadequacy of the new rationalism gave rise to a new form of skepticism: to externalism. Contrary to internalism it explains science and its development with purely external, causal factors. The best known example of an externalist explanation of science is the strong program of the sociology of knowledge presented by the so-called Edinburgh School. The elements of this new version of skepticism can be found also in Thomas Kuhn's *The Structure of Scientific Revolutions* (although Kuhn later tried to refute this skeptical interpretation of his book) and in the

⁴See for example Popper 2002: 8 (section 2, Elimination of psychologism): 'My view can be expressed by saying that every discovery contains "an irrational element" or "a creative intuition", in Bergson's sense. In a similar way Einstein speaks of the "search for those highly universal laws...".

⁵This idea seems to be best articulated in the Popper's famous idea of epistemology without a knowing subject.

methodological anarchism of Paul Feyerabend. The main idea of externalism consists in eliminating *reason* at all by reducing it to a kind of a causal factor identical or similar to *emotion*.

Externalism has its own unsolvable problems, both logical and factual (see, for example, Życiński 1988: 115–123). We do not need to present theme here. They are not directly connected with our topic. It is enough to say, with Życiński (1988: 145), that both internalism and externalism turned out with time to be inadequate explanations of science:

Long discussions on the nature of scientific knowledge revealed, that science is neither so rational as young Popper argued nor so sociologically dependent as Kuhn claimed in the first edition of 'The Structure of Scientific Revolutions'.

What does the question 'Can reason be emotional?' mean in this new philosophical context? Can this question go beyond the traditional dualisms: rationalism vs skepticism, internalism vs externalism? This new way of explaining *reason* should preserve basic intuitions and experiences lying behind the classical concept of reason, and at the same time it should be capable of incorporating new metascientific data about rationality and science. Basic intuitions are constituted by experiences of universal, necessary and rule-following aspects of the universe and of our cognitive behavior. New data concerns the changing nature of our rationality and the irremovable role of extrarational elements, like emotions, in scientific behavior.

4. According to Życiński there is a way for a better theory, capable of superseding internalism and externalism, rationalism and skepticism. Looked at from a distance, both appear to share a common presupposition. It is right that the classical dualistic concept of pure reason excludes any causal (extrarational or arational) factors from being within true knowledge and science. Of course, these opposite explanations make an opposite use of this premise. Internalism accepts it as a fundamental truth. Externalism rejects it but in the same time accepts its negation. So, paradoxically, externalism cannot do without this presupposition. Its whole theoretical substance lies in the *negation* of rationalistic dogma. In that sense, externalism is parasitic on the 'demise' of the pure and normative concept of reason (science), and thus is not less rationalistic than internalism itself. (On the idea of the 'demise' of normative rationalism, see Laudan 1996.)

What we need is a way of denying rationalistic dogma without running into its relativistic double. It is a way of looking for a new concept of reason. *Reason* has to be recognized as a regular object of knowing like all natural objects. If this is so, the way we come to know objective reason (objective rationality) does not differ much from the way we come to know natural objects: through (philosophical) hypotheses that have to be tested against metascientific facts. Our knowledge of *reason* is progressive in the same way that our knowledge of natural objects is. Such an *objective reason* or *objective rationality* unveils itself to us progressively through the history of science: we start with some primitive hypotheses, and with time we come to a much more sophisticated knowledge. Traditional paradigms of reason or rationality – logics, mathematics and science – do not give us direct access to the architecture of reason, as Aristotle or Kant and their followers believed. In order to know objective

reason we have to study the way science changes over centuries, unveiling new aspects or characteristics of that hidden *reason*.

From this developmental or evolutionary perspective of understanding objective reason, the dualistic hypothesis of an emotionless reason is nothing but a first and tentative explanation of what *reason* would be. New metascientific data falsify this primitive hypothesis and compel philosophers to modify it in such a way to be able to explain these new facts.⁶ Among those facts there are facts about the essential role of extrarational causes in some methodological contexts. According to these new data, emotions are much more than obliterable and negligible circumstances or contexts of *reason*. *Objective reason* is accessible to our cognition only as an embodied reason, and as embodied in an essential way: i.e. this embodiment cannot be fully eliminated. Michael Polanyi's ideas of tacit knowing, of personal knowledge, of embodied knowledge and of enthymematic and delayed rationality, are much more adequate explanations of what *reason* is than traditional ideas of transparent, articulated and instant rationality.⁷

5. Such a metascientific approach to *reason* and *emotion* can be for many scientists too abstract. The empirical sciences deal with such notions in a completely different way, the way imposed by the nature of the empirical method. What they do can be called a naturalization of these concepts.

We can find a clear example of such a naturalization process in LeDoux (2014). He is dealing with *emotion*. For LeDoux even this concept, because of its philosophical and psychological connotations, is too confusing to be a proper name for objects of empirical research. Its confusing character makes it useless as a guide for choosing the right phenomena for investigation.

'Emotion has happened.' With these words Joseph LeDoux (2014: 14) describes the exponential growth of the number of papers in psychology and neuroscience since the 1960s with the word 'emotion' in the title. But immediately he asks: 'But what really has happened? What is being studied in all these papers on emotion?' and he continues:

Actually, the term 'emotion' is not well defined in most publications. Perhaps this is not surprising since there is little consensus about what emotion is, and how it differs from other aspects of human mind and behavior, in spite of discussion and debate that dates back to the earliest days of modern biology and psychology.

However, precise definitions are not indispensable for making science. Empirical research can be done without using this confusing common language, or the philosophical notion of emotion. LeDoux presents the following procedure. First, scientists

⁶Życiński 1988: 135: 'In this situation, attempts to absolutize the concept of rationality as well as the tendency toward a dichotomous division of interpretations into rational and irrational are an expression of a certain philosophy defended in a dogmatic manner but falsified by science itself'. The idea of falsification of philosophical theories through metascientific facts was already present in the early writings of Popper, but only implicitly. In order to avoid unnecessary misunderstandings he preferred to use the term 'falsification' only in the context of the empirical method. In the context of the transcendental method of philosophy he used the expression 'transcendental inconsistency or contradiction (*Widerspruch*)'.

⁷The term 'enthymematic rationality' can be found in Cattani 1995: 65; the term 'instant rationality' in Życiński 1988: 128.

have to use common language 'feeling words' like 'fear', 'anger', 'love', 'sadness', 'jealousy' and so on, as 'signposts to explore the terrain of emotions', in order to identify emotional phenomena like, for example, 'responses that occur when an organism detects and responds to significant events in the course of surviving and/ or maintaining well-being'. Second, they have to separate these phenomena from the confusing introspective concept of emotion or feeling, and to continue their work with purely biological or behavioral phenomena: 'The challenge for emotion researchers is to understand the relation of the phenomena to the field of emotion without redefining them as fundamentally emotional phenomena, and thus infusing phenomena with confusing implications' (LeDoux 2014: 15).

Empirical scientists can do very well without the term 'emotion' as such. Instead of using this term they go back to the original (perceptual) intuitions underlying different common language emotions and choose only those empirical aspects of these intuitive phenomena that are manageable within a chosen empirical method of investigation.

The same procedure of naturalization can be applied to the even more confusing concept of reason. Empirical studies of the phenomena of cognition can be done as well.

With this (or an analogous) procedure, empirical science is preparing theoretically – or 'constructing' – its object of investigation.⁸ The empirical sciences (like neuroscience) do not study full-blooded emotions as we know them from our everyday life, from *belles-lettres*, poems, etc. Scientific objects are only those objects that fit the chosen method. Aspects or intuitions that do not fit the method are in most cases ignored: they are not *objects* of science.

6. The question arises of whether this kind of naturalization procedure does not lead straightforwardly to reductionism, to the elimination from our language and from our world words and objects like *reason* or *emotion* that are not manageable by the empirical method. From this radical empiricist point of view the question raised in the title, 'Can reason be emotional?', would be meaningless.

The reductionist tendency is well known from the history of philosophy; however, all its limitations are also well known. It is a naïve, non-critical empiricism overlooking the fact that common language intuitions do play an important methodological role in the critical assessment of the adequate character of our theories. Every good theory must be related in some ordered way to the intuitions underlying our common language concepts: it must explain these intuitions in a consistent way. The simple negation of those intuitions and experiences that do not fit the empirical method seems to be a too easy and arbitrary metaphysical decision. Moreover, every scientific language, even a formalized one, needs to be interpreted. This interpretation is possible only within a common language. Such a language functions as the most universal meta-language for all scientific languages.

⁸By 'construction' I do not mean a subjective, social or psychological, construction but a theoretical one. The objects of science are only those objects that can appear in the theory or in an equation. Another term that could be used here is 'theoretical idealization'. The objects of common language usually are not proper objects of empirical science because they cannot enter as such into scientific theories.

What is true of common language does not hold necessarily true of philosophical language. The latter can be justifiably eliminated when the context of its definition, a philosophical theory, become falsified through philosophical facts. The case of reason and emotion seems to be however quite different in comparison with the situation of purely theoretical terms in empirical sciences, like *phlogiston* or (*physical*) ether. These theoretical terms were eliminated from science together with the theories for which they were coined. The reason for this difference is simple, and in line with what was said above about the methodological or heuristic importance of common language. Philosophical reason and emotion have common language origins and are explanations of common language intuitions and experiences. *Phlogiston* and *ether* are artificially coined terms just for the purposes of some theories. Even if a philosophical theory of reason and emotion becomes refuted, common language intuitions and problems related to them remain and need another, better explanation. The problems of universality, necessity and rule, following the character of our knowledge, as well as that of nature, are still important for the life of humans and for our understanding of science itself; and as such they cannot be answered or eliminated by empirical science. An analogous situation happens with emotions. They are for us much more than an MRI scan can detect in our brains. And MRI results always have to be interpreted using our common language terms.

LeDoux is very aware of the limitations of the procedure of eliminating from empirical science common language and philosophical intuitions. With this procedure he does not mean to reduce emotion to biological phenomena, neither to define it nor to explain it. He means only to identify some chosen empirical aspects of emotion in order to be able to perform fruitful empirical research without entering 'endless debates about what emotion is' (LeDoux 2014, 16). This very cautious attitude makes us only more aware of the very intricate way common, philosophical and scientific languages are interrelated.

7. *Conclusion*. How are we to answer the question raised in the title? Taking into account the historical development of science and of metascientific reflection we can say, a little bit paradoxically, that reason can and should be emotional, because it is emotional. These statements are possible today not only in common (descriptive) language but also in philosophical (theoretical) language. And maybe empirical science will be able one day to show us how this relationship functions in our brains, or rather what kind of empirical phenomena in our brains can be correlated with our experience and with our knowledge of the inextricable intertwining of reason and emotions.

Bibliography

Aristotle. (1994). 'Słownik terminów Arystotelesowych' (Lexicon of Aristotelian Terms) in Arystoteles, Dzieła Wszystkie (Complete Works, vol. 7). Warszawa: Wydawnictwo PWN.

Cattani, A. (1995). Popper, Polanyi and the notion of rationality. In J. Misiek (Ed.), *The problem of rationality in science and its philosophy* (Boston studies in the philosophy of science, Vol. 160, pp. 65–74). Dordrecht: Kluwer Academic Publishers.

- Dębiec, J. (2014). The matter of emotions: Toward the brain-based theory of emotions. In J. Dębiec, M. Heller, B. BroŻek, & J. LeDoux (Eds.), *The emotional brain revisited* (pp. 145–161). Kraków: Copernicus Center Press.
- Lalande, A. (1985). *Vocabulaire technique et critique de la philosophie*. Paris: Presses Universitaires de France.
- Laudan, L. (1996). The demise of the demarcation problem. In L. Laudan (Ed.), Beyond positivism and relativism. Theory, method, and evidence of science (pp. 210–222). Boulder/Oxford: Westview Press.
- LeDoux, J. (2014). Rethinking the emotional brain. In J. Dębiec, M. Heller, B. Brożek, & J. LeDoux (Eds.), *The emotional brain revisited* (pp. 13–83). Kraków: Copernicus Center Press (first published in 2012 in *Neuron*, 73 (4): 653–676).
- Pascal, B. (2010). Thoughts (http://www.bartleby.com/48/1/4.html. Accessed 5 May 2015).
- Popper, K. R. (2002). *The logic of scientific discovery*. London/New York: Routledge (first published in 1934 as *Logik der Forschung* (Vienna: Verlag von Julius Springer)).
- Życiński, J. M. (1988). The structure of the metascientific revolution. An essay on the growth of modern science. Tucson: Pachart Publishing House.

Zbigniew Liana is a Roman Catholic priest. He holds a PhD in philosophy. His academic fields of interest are philosophy of science and of language, logic, and the science–theology relationship, especially its historical and methodological aspects. He currently lectures on these topics at the John Paul II University in Kraków, Poland. He is also a member of the Copernicus Center for Interdisciplinary Studies in Kraków. In the years 1998–2006 he was a member of the Council of ESSSAT, and he has published papers in the ESSSAT Yearbook as well as in the series Issues in Science and Theology.

Chapter 21 Ethics, Emotions and Theology: A Humean Investigation

Hans D. Muller

Abstract This article pursues the theme, 'Do emotions shape the world?' through an investigation into the implications of the work of David Hume, the ethical theorist who went further than any other in the western philosophical tradition to center moral theory on the emotions. Hume's sentiment-based account of ethics is traditionally viewed as a dissenting position to the more mainstream rationalist ethics exemplified by the works of Immanuel Kant. This study of the consequences of taking Hume's emotion-centered theory as one's starting place provides a particular context in which to give one answer to the following research question: 'Is a worldview which emphasizes the importance of emotions likely to raise theological concerns to a higher position than they would be if one embraced a worldview which emphasizes the importance of reason?' We find that the combination of Hume's empiricist epistemology, according to which all ideas come from either sense perception or internal reflection, and his notion of the 'natural objects' of the passions, places an impediment between moral agents and some very central theological concerns and issues. I conclude with some suggestions about how theorists interested in combining an emotion-centered account of ethics with an epistemology that is more amenable to traditional theological issues might proceed.

Keywords Philosophy • Ethics • Emotions • Theology • Scientism • Hume • Sentimentalism • Intentionality • Kant • Adam Smith • Descartes

When a group dedicated to investigating the intersection of science and theology asks the question, 'Do emotions shape the world?' it is intriguing, in part, because it invites us to think about how the distinction between emotion and reason, on the one hand, is related to the distinction between theology and science, on the other hand. Of course those four terms – emotion, reason, theology, and science – are each protean in their own way, so care is required in order to frame the discussion in such a way that the issues will be sufficiently clear. To begin with, there is some

H.D. Muller (🖂)

Department of Philosophy, American University of Beirut, Beirut, Lebanon e-mail: hm38@aub.edu.lb

[©] Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2_21

controversy about just what psychological phenomena 'emotion' and 'reason' refer to, and where the correct line between the two respective sets of phenomena might be. And while the definitions of 'theology' and 'science' are relatively less controversial, both of those terms have long histories and have been understood in different ways in different times and contexts. All that having been said, I think it is fair to say that there has been a persistent historical tendency to think in terms of two parallel dichotomies: (a) the dichotomy between emotion and reason, on the one hand, and (b) the dichotomy between science and religion, on the other hand. One could also set the same stage a slightly different way by talking about 'affinities' such as the (i) the affinity between reason and science, and (ii) the affinity between emotion and religion. So here we can articulate a research question that will be useful for focusing the discussion: *Is a worldview which emphasizes the importance of emotions likely to raise theological concerns to a higher position than they would be if one embraced a worldview which emphasizes the importance of reason?*

As it stands, that research question is still too broad for an academic paper, and I will focus accordingly on one particular sphere: ethics. And I will pursue this question in the context of morality and moral theory *via* a two-part strategy. First I survey some contemporary philosophical discussions that exemplify the current fashion for seeing reason as allied with scientism and, by extension, atheism.¹ Next, I will put that bit of twenty-first century pro-scientific rationalistic discourse into a particular context by considering an eighteenth century dispute between rationalistic and sentiment-centered approaches to ethics and moral psychology. I think that shift in focus is useful because so often the contrast between science and theology is cast in terms of matters of fact, in the case of science, as opposed to concerns with value, in the case of theology. But the debate between Scottish sentimentalists on the one hand, and German rationalists on the other hand, provides us with a clear example where the contrast between emotion-centered and reason-centered approaches falls exclusively on the *value* side of the aforementioned fact-value divide.

A bit more on the historical context: one of the towering figures of the Scottish Enlightenment, David Hume, produced a systematic study of morality which placed the empirical study of emotions (or 'sentiments and passions') squarely at the center. Hume's *Treatise of Human Nature* and *Enquiry Concerning the Principles of Morals* stand at one end of a spectrum of which the opposite end is occupied by such works by Immanuel Kant as *Groundwork of the Metaphysics of Morals* and *Critique of Practical Reason*. This oversimplifies the dialectic a bit, but it can be helpful to think of Hume as championing the idea that morality is essentially a matter of emotion, whereas Kant insists that all ethical claims must ultimately be grounded in reason alone. That being the case, what we have is a paradigm which cuts up the dichotomies and affinities in a way that is different from the ordinary way of doing so: i.e., the debate between the sentimentalists and the rationalists is

¹Just how we should understand the term 'scientism' will be matter of some discussion in this essay, but here at the outset we can characterize it as the tendency to defer to science when the conclusions of that approach, broadly construed, conflict with the conclusions of competing systems of thought.

about whether our values, and our claims about what is right and wrong, ought to be founded primarily on emotion or reason. And, in this context, that dynamic is orthogonal to the presumed affinity of emotion and theology as contrasted to the presumed affinity of reason and science. And because it is orthogonal in this way, it will help us isolate the question of whether an emotion-centered approach to ethics is particularly amenable to theologically oriented approaches to this area of value theory.

In order to set the stage for that discussion, we shall begin by considering a contemporary discussion of the relationship between scientism and the sorts of *values* central to traditional accounts of morality. This will be useful because it provides a paradigm case of the threat that reason-centered scientism is often presumed to pose to such normative concepts as 'right' and 'wrong'; *and* this case is particularly illuminating because it comes *not* from a theologically oriented thinker who might be thought of as the traditional critic of this strain of scientism, but from within the ranks of scientistic philosophy itself. So we can be sure that the supposed threat to morality from science here is no straw man, but is rather based upon the sober reflections of one of scientism's most enthusiastic advocates who is sincerely assessing the prospects for this kind of project.

A Case of Twenty-First Century Scientism Being Understood as a Threat to Moral Norms

In some circles the label 'scientism' has acquired a pejorative air about it, and it *can* be used to suggest an *unwarranted* and *exaggerated* respect for, and deference toward, science. The scientifically oriented philosopher Alexander Rosenberg takes exception to this pejorative use, and 'takes[s] a page out of PR of the gay and lesbian community and (mis) appropriate the word 'scientistic' the way they did to 'gay' and 'queer.' Scientism is my label for what anyone who takes science seriously should believe, and scientistic is just an in-your-face adjective for accepting science's description of reality' (Rosenberg 2014: 18).

And accepting science's description of reality involves, in Rosenberg's terms, embracing the idea that *the physical facts fix all the facts* such that the one's answer to the question, 'What is the world really like?' is this:

It's fermions and bosons and everything that can be made up of them and nothing that can't be made up of them. All the facts about fermions and bosons determine or 'fix' all the other facts about reality and what exists in this universe or any other if, as physics may end up showing, there are other ones. Another way of expressing this fact fixing by physics is to say that all the other facts – the chemical, biological, psychological, social, economic, political, cultural facts – supervene on the physical facts and are ultimately explained by them. And if physics can't in principle fix a putative fact, it is no fact at all. In effect, scientism's metaphysics is, to more than a first approximation, given by what physics tells us about the universe. The reason we trust physics to be scientism's metaphysics is its track record of fantastically powerful explanation, prediction, and technical application. If what physics

says about reality doesn't go, that track record would be a totally inexplicable coincidence. Neither science nor scientism stands still for coincidence. The no-miracles and inference-to-the-best-explanation arguments are on the right track. Their alternatives are obviously mistaken (Rosenberg 2014: 19).

So now we have the basic tenets of one sort of scientifically oriented philosophical approach. For the purposes of my project, the interesting question is what does this sort of scientism have to tell us about the prospects for any traditional conception of ethics? As Rosenberg makes clear (and it is to his credit that he has the intellectual honesty to face up to this unattractive implication of his metaphysics), the situation for the scientistic philosopher is a difficult one:

It's obvious that in a world where all the facts are fixed by the physical facts there can be no set of free-floating independently existing norms or values (or facts about them) that humans are uniquely equipped to discern and act on. So, if we hope to scientifically ground the core morality that everyone (save some psychopaths and sociopaths) endorses, then we face a serious problem. The only way all or most normal humans could have come to share a core morality is through selection on alternative moral codes or systems, a process that resulted in just one winning the evolutionary struggle and becoming 'fixed' in the population. If our universal shared moral core were both the one selected for and also the right moral core, then the correlation of being right and being selected for couldn't be a coincidence. Scientism doesn't tolerate cosmic coincidences....

[But it is] easy to show that neither of the two alternative strategies a scientific justification of morality faces can be right. Just because there is a strong selection for a moral norm, there is no reason to think it right. Think of the adaptational benefits of racist, xenophobic, or patriarchal norms. You can't justify morality by showing its Darwinian pedigree. That way lies the moral disaster of social Spencerianism (better but wrongly known as social Darwinism; see Spencer 1851). The other alternative – that our moral core was selected for because it was true, correct, or right – is an equally far-fetched idea. And in part for the same reasons. The process of natural selection is not in general good at filtering for true beliefs, only for ones hitherto convenient for our lines of descent. Think of folk physics, folk biology, and most of all folk psychology. Since natural selection has no foresight, we have no idea whether the moral core we now endorse will hold up, be selected for, over the long-term future of our species, if any.

If we were going to limit ourselves to the resources of science to ground knowledge, then there can't be any moral knowledge (Rosenberg 2014: 22–23, my emphasis).

So here we have a clear example of scientism leading to moral nihilism. This is, I presume, a result that is not surprising to many readers of this volume. And if one is impressed with the aforementioned affinity between reason and science, on the one hand, and emotion and theology, on the other hand (or, alternatively, the oppositions between emotion-and-reason and science-and-theology), then one might indeed think that turning away from reason and turning toward sentiment and emotionality might be a way to escape Rosenberg's nihilistic conclusion with regards to morality. And it is here where it becomes appropriate to turn to one of the leading figures of the Scottish Enlightenment.

In the western philosophical tradition, it is David Hume who most forcefully advocated the supremacy of the passions over reason in the sphere of morality. It is he who provided us with the famous (or infamous, depending on your perspective) slogan: 'Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them' (Hume 2000: 2, 3, 3, p. 266).

And given that Hume is the preeminent figure in one of the leading schools of ethical thought, i.e. the attempt to find the right way to live one's life, one might think that we have here a natural ally for those who fall in line with the Christian edict to *love thy neighbor*. It is the Gospel of Mark in which this idea is attributed to Jesus of Nazareth along with, of course, the suggestion that such a principle supersedes all the commands previously endorsed by the extant religious hierarchies.

Another New Testament pronouncement that might seem particularly in line with Hume in this regard is this: 'If I speak in the tongues of men and angels, but have not love, I am a noisy gong or a clanging cymbal' (I Corinthians 13:1, English Standard Version). Here Paul is telling the early Christians in Corinth that the most impressive intellectual (or 'cognitive') achievements are without worth unless they are infused with the correct emotional tenor. And indeed, another of Hume's famous contrasts between the respective job descriptions, as it were, of passion and reason seems very much in line with Paul's message above:

'Tis not contrary to reason for me to prefer the destruction of the whole world to the scratching of my finger. 'Tis not contrary to reason for me to choose my total ruin, to prevent the least uneasiness of an *Indian* or person wholly unknown to me (Hume 2000: 2, 3, 3, p. 267).

Hume's message, like Paul's, is that unaided reason is ill-equipped to guide moral choices and, were we to be left to its lights alone, we would be utterly without direction and focus.

To understand why Hume sees reason and passion as contrasted in this way, is to come face to face with his radical project of basing morality on sentiment. Hume's basic idea here is that moral standards are constituted by the typical emotional reactions of approval and disapproval that human beings habitually feel towards different sorts of actions and character traits. To put it in the words of the venerable Hume scholar, Thomas Holden: 'Very roughly, if an unbiased human observer would naturally react to such-and-such a behavioral trait with a characteristic sentiment of approval, then that trait is a virtue; if they would react with characteristic sentiments of disapproval, then that trait is a vice' (Holden 2010: 49).

The Humean project for morality is empiricist in spirit and it begins with what he considers to be the straightforward observation that guilt and shame regulate each person's attitudes to themselves with the potential anger or disdain of others. To set the stage for this discussion, it will be useful to consider an insight from Hume's contemporary and friend, Adam Smith, who also developed a sentiment-based account of ethics:

The jurisdiction of the man without, is founded altogether in the desire of actual praise, and in the aversion to actual blame. The jurisdiction of the man within, is founded altogether in the desire of praise-worthiness, and in the aversion to blame-worthiness; in the desire of possessing those qualities; and performing those actions, which we love and admire in other people; and in the dread of possessing those qualities, and performing those actions, which we have actions, which we have and despise in other people (Smith 1976: 3, 2, 32, p. 130–131).

The idea here, and on this point Hume agrees with Smith, is that each human moral agent is capable of regarding her action in a general way as an action that exemplifies some properties. These same properties elicit admiration or hatred
when we encounter them in the actions of other people, and we wish it to be the case that our own actions arouse admiration or respect in others, and we are fearful of our actions arousing hatred.

So for Smith, we guide ourselves toward the morally appropriate action by attending to what he calls the 'impartial spectator within the breast,' which is a sort of symbol of the moral responsibility to reflect on our own motives and actions.² So Smith thinks our sense of right and wrong is rooted, first, in our ability to pay attention to the subtle interplay between 'the man within our breast' and 'the man without', and second, in the capacity of that interplay to underwrite a perspective that is general and thus *impartial*. Hume tells a related, but slightly simpler, story in which we utilize our ability to take up what he calls 'the common point of view' to get a hold on the difference between judgments we make purely with regard to our self-interest and those in which we take others into consideration as well.

When a man denominates another his *enemy*, his *rival*, his *antagonist*, his adversary, he is understood to speak the language of self-love, and to express sentiments, peculiar to himself, and arising from his particular circumstances and situation. But when he bestows on any man the epithets of vicious or odious or depraved, he then speaks another language, and expresses sentiments in which, he expects, all his audience are to concur with him. He must here, therefore, depart from his private and particular situation, and must chuse a point of view, common to him with others: He must move some universal principle of the human frame, and touch a string, to which all mankind have an accord and symphony. If he mean, therefore, to express, that this man possesses qualities, whose tendency is pernicious to society, he has chosen this common point of view, and has touched the principle of humanity, in which every man, to some degree, concurs. While the human heart is compounded of the same elements as at present, it will never be wholly indifferent to public good, nor entirely unaffected with the tendency of characters and manners. And though this affection of humanity may not generally be esteemed so strong as vanity or ambition, yet, being common to all men, it can alone be the foundation of morals, or of any general system of blame or praise. One man's ambition is not another's ambition, nor will the same event or object satisfy both: But the humanity of every one; and the same object touches this passion in all human creatures (Hume 1998: 9, 1, p. 75).

Hume emphasizes that ethics is not *sui generis* in this regard. If my military rival performs a task excellently, such as construct a fortification, I can simultaneously curse it as an obstacle to my own goals and also respect it as an example of a job well done, ideal for its purpose, well built, etc. (Hume 2000: 3, 3, 1, p. 374). There are general standards for a good fort: i.e., that describe what anyone who is looking to hold a defensive position should want. We might want to hire away our enemy's chief builder, or hold that fort up as a paradigm example for our own engineers to imitate. As Simon Blackburn emphasizes, '[t]o do any of these things we need the capacity to see past the impact of this fortification on our own concerns, and assess it in an impartial manner' (Blackburn 1998: 201–202).

²Simon Blackburn (1998: 201) has argued that Smith holds out an ideal of a 'restless ... duty of self-scrutiny' that is 'typically Calvinist.' I shall not hazard a verdict about whether Blackburn is right about the theological origin of Smith's famous Impartial Spectator, but my discussion of Smith's account of practical reason, and its relation to Hume, is indebted to Blackburn's scholar-ship in this area.

There are, of course, many additional details to Hume's story about how we use this capacity to take the impartial point of view to become full moral agents, judging our actions and those of others as either morally appropriate or not. But I take it that this basic idea of using a very general leap of imagination to think about things from a perspective beyond that of our narrow personal interests to get this process started is clear enough. On Hume's account, this passion – which, you will recall, is explicated as a 'universal principle of the human frame...to which all mankind have in accord and symphony' – is the basis of morality. And it is that essentially emotional, and essentially social, grounding upon which the rest of the edifice stands. The other key component of Hume's sentiment-centered account of emotion is sympathy. And it is that aspect of Humean moral psychology to which we now turn.

The Role of Sympathy in Hume's Moral System

The first thing to note here is that 'sympathy' is a technical term for Hume and it refers to a range of phenomena of fellow-feeling and is not, for instance, a synonym for 'pity,' as it is in some common parlance. For Hume, sympathy is a kind of interpersonal mechanism that connects us to the passions and sentiments of others. If I witness a person experiencing a certain passion, according to Hume it is simply part of my social disposition: I will experiencing an 'echo' of that passion in the form of a very similar – if less intense – passion in my own self. It is important to recognize that such a passion will be a fellow-feeling in the strong sense that I will feel it *with* the impassioned person. An example will help make this clear: George is anxious and fearful because his son has a dangerous case of appendicitis and it is not yet clear if he will survive the ordeal. Ralph becomes aware of George's situation and also experiences anxiety and fear. For this to count as a case of sympathy in Hume's technical sense, it is crucial that Ralph's angst is not exactly his own (e.g., because, say, he likes the child and will miss him if he dies), but rather is an echo, or an imitation, of *George's* angst.

With that clarification out of the way, the next thing about Hume's account to notice is that he thinks of sympathy as rooted in perceptual experience and as need-ing to be understood within the framework of his empiricist epistemology:

'Tis indeed evident that when we sympathize with the passions and sentiments of others, these movements appear first in *our* mind as mere ideas, and are conceiv'd to belong to another person, as we conceive any other matter of fact.' Tis also evident, that the ideas of the affections of others are converted into the very passions they represent, and that the passions arise in conformity to the images we form of them. All this is an object of the plainest experience, and depends not on any hypothesis of philosophy (Hume 2000: 2, 1, 11, p. 208).

So Hume's empiricist epistemology involves a psychological story about how the mind receives images ('ideas' in Hume's terminology) of the passions and sentiments of other people. And the mechanism, as it were, for a transmission of those emotions is the sympathetic reaction. It is important to bear in mind that since this is an empiricist account, the starting point must be our perceptions of observable effects of such emotions on the people who experience them:

When any affection is infus'd by sympathy, it is at first known only by its effects, and by those external signs and countenances and conversation, which convey an idea of it. This idea is presently converted into an impression, and acquires such a degree of force and vivacity as to become the very passion itself, and produce an equal emotion, as any original affection (Hume 2000: 2, 1, 11, p. 206).

So, for Hume, the passion that I experience *in sympathy* with yours will often be of *equal* force and vivacity to that of your original one. While that alone is remarkable, it may be even more striking that I can be seen as standing by as a passive recipient over whom the passion can have a great deal of influence indeed:

No quality of human nature is more remarkable, both in itself and in its consequences, than that propensity to have sympathy with others, and to receive by communication their inclinations and sentiments, however different, or even contrary to our own (Hume 2000: 2, 1, 11, p. 206).

And Hume provides a compelling example of this phenomenon:

A good natur'd man finds himself in an instant of the same humour of his company ... A chearful countenance infuses a sensible complacency and serenity upon my mind; as an angry or sorrowful one throws a sudden damp upon me. Hatred, resentment, esteem, love, courage, mirth and melancholy; all these passions I feel more from communication then from my own natural temper and disposition (Hume 2000: 2, 1, 11, p. 206).

So even if I am in a good mood, your distress can pull me along with you into despair. Likewise if I am in a bad way emotionally, your good cheer can act upon me as a tonic. In this way, we can see that Hume's account of sympathy is one in which our well-being and happiness is intimately bound up with that of those in our community. Accordingly, we are motivated to seek and preserve the welfare of others.

One important issue to notice here is how plausibly Hume's examples render one of his basic claims about morality that may have originally struck the reader as controversial. First we have the claim that emotion and sentiment quite naturally attune me to your well-being, and thus bring me to engage with you as a moral agent. And that claim is combined with the view that my rational capacities are utterly ill equipped to that very same task. This was the point, you will recall, of him saying, "Tis not contrary to reason for me to prefer the destruction of the whole world to the scratching of my finger' (Hume 2000: 2, 3, 3, p. 267). And the connection between that idea and the very famous line, 'Reason is, and ought only to be the slave of the passions, and can never pretend to any office other than to serve and obey them,' should by now be clear (Hume 2000: 2, 3, 3, p. 266).

There is a second issue which must be addressed before we can move on. Among ethical theorists, there is a substantial debate about whether a sentiment-based ethics of the sort Hume proposes can explain how our motivation to act morally can ever be other than self-interested. In other words, the very aspect that made it seem so appealing at the outset – the fact that it makes my happiness and well-being fairly dependent on your happiness and well-being - can in fact make it liable to a particularly persistent sort of criticism that it is committed to what amounts to ethical egoism. While I think the Humean project can answer that objection, it is too big an issue to tackle in this format. For the purposes of this essay, the most salient thing is that the leading candidate for a theory that does not face the charge of ethical egoism is Kantian deontology. The Kantian tradition views sentiment-based approaches such as Smith and Hume's with suspicion precisely because, from Kant's perspective, the emotions appear to be an unreliable guide for morality because they subject us to bias towards those we like and against those we dislike. There is a lot to be said about that debate, but none of it sheds much light on the current discussion because we are primarily interested in the question of whether the move away from reason and towards emotions opens up room for theological concerns in the ethical sphere. The Kantian approach isn't really an option for the theorist interested in making progress in the ethical sphere by combining an emotion-centered approach with theological concerns. As you will recall, the key distinction between Kantian and Humean approaches to ethics is that the former base their account on the distinctive contributions of *reason*. So Kant's rationalist ethics is headed in the wrong direction, as it were, to help us with our research question. And now we have enough of Hume's account in focus to ask whether his sentiment-based account can lead to progress in this area. We shall begin that discussion with Hume's surprising answer to the seemingly simple question, 'Is God good?'

Hume's Skepticism About Moral Judgments Concerning God

Hume holds a distinctive position with respect to the possibility of humans making moral judgments concerning God that is often referred to with the potentially misleading label of 'moral atheism.' The reason that moniker can be misleading is that 'atheist' is traditionally used to refer to someone who denies the existence of God. But Hume's moral atheism is the more complicated and more intriguing conditional thesis that *if there is a deity that created the universe, then that deity is not the proper object of moral assessment.* In other words, the deity is not a moral entity of the sort that is morally culpable. Put yet another way, we can say that Hume's moral atheism is the view that God is amoral in a sense that a stone or a snowstorm might be described as amoral. (These are Tom Holden's examples (2010: 9): throughout this discussion, I am relying on Holden's scholarship.)

Let's take that pair of examples as a starting point in order to bring the key issues into sufficiently clear focus. In what sense are stones and snowstorms *not* among the sorts of things that we would judge to be evil or good? Perhaps one's first suggestion would be that since stones and snowstorms are neither sentient nor sapient, they can't *intend* to do one harm or benefit, so it would be inappropriate to take a moral stance toward them. But, that is *not* in fact the sense that we are interested in here. To understand Hume's position, we must not attend to any feature of the stone or snowstorm *per se*, but rather notice the specific features of the psychological capacities through which we normally form moral judgments.

Hume has a quite developed theory of *the intentionality of the emotions* as it would be called in the philosophical jargon. 'Intentionality' here refers to *directionality* or *aboutness*, and the basic idea is that each emotional episode is about some object or event. And this facet of our emotional lives is borne out by the way we talk about affect. We very frequently use emotion words in combination with a preposition, such as 'I was afraid *of* the rabid dog,' 'I feel guilty *about* embarrassing our guest,' 'The news *of* your complete recovery makes me very happy,' etc. Hume's philosophical psychology is very subtly attuned to this feature of affect. For Hume, any given emotional episode considered apart from the rest of our thoughts and feelings will be just a raw sensation with no necessary or intrinsic object-directedness. But when considered as a part of our whole mental economy, as it were, Hume tells us that there are three parts to the analysis of its intentionality. To take an example, my thinking about a rival's success (the cause of the emotion) will trigger the feeling we call jealousy (the emotion itself), which then turns my thoughts to the rival herself (the object of the emotion): I am jealous of her *because* of her success.

Here we have an example of a single emotional episode having an intentional object, so now we must turn to the question of what it is for a *type* of emotion (or 'passion' in Hume's terms) to have a *natural object*. On this issue, Holden is usefully clear:

This is a claim about the regular, law-like operation of types of passion, as determined by our common human nature. For Hume, it is a basic fact about human psychology that each of the various types of passion directs our thought toward, and thereby refers to, certain types of being rather than others. Our psychological hardwiring ties each species of passion to a given range of objects through near-universal laws, such that that passion-type dependably carries our thought (and thereby refers to) objects of just that sort (Holden 2010: 55–56).

That might sound rather technical, but the basic idea is one with which we are all familiar and without which our emotional lives would not have the coherence that they do: e.g., the fact that fear is directed towards scary things and jealousy towards desirable things that we ourselves do not have, etc. This is a very important observation about our emotions. In fact, it points to the features which make it possible for affect to make an intelligible contribution to our lives and to make the behavior of others sensible in our eyes. Anthony Kenny is probably the theorist who has discussed this most thoroughly:

...each of the emotions is appropriate – logically, and not just morally appropriate – only to certain restricted objects. One cannot be afraid of just anything, nor happy about anything whatsoever. If a man says that he is afraid of wining £10,000 in the pools, we want to ask him more: does he believe that money corrupts, or does he expect to lose his friends, or to be annoyed by begging letters, or what? If we can elicit from him only descriptions of the good aspects of the situation, then we cannot understand why he reports his emotion as fear and not hope. (Kenny 1963: 192)

And of course this isn't something that is specific to fear. As Hume rightly observed, this appears to be something that applies to all the various emotion types, and Kenny's additional examples help buttress this case:

... it is possible to be envious of one's own fruit trees; but only if one mistakenly believes that the land on which they stand is part of one's neighbor's property; just as it is possible to feel remorse for the failure of the crops in Vietnam if one believes that it was due to the inadequacy of one's prayers. What is not possible is to envy something which one believes to belong to oneself, or to feel remorse for something in which one believes one had no part (Kenny 1963: 193).

So it is a familiar enough idea that there is a coherent grouping of things that each type of emotion is capable of being about. And Kenny's examples are really just applications of Hume's central observation.

As we have noted throughout this essay, Hume's account of morality is centered on our sentiments and, in turn, his account of our sentiments is based on a set of empirical claims about our psychological make-up and the way that psychology interacts with the world. For our purposes, the most important facet of Hume's account of the psychology and intentionality of our emotions is one that he explained in his June 30, 1743 letter to his good friend William Mure:

[The deity] is not the natural object of any Passion or affection. He is no Object either of the Senses of Imagination, & very little of Understanding, without which it is impossible to excite any Affection ... Please to observe, that I not only exclude the turbulent Passions, the calm Affections. Neither of them can operate without the Assistance of the Senses, & Imagination, or at least a more compleat Knowledge of the Object than we have of the deity (1954: 13).

In order to understand why Hume thinks we do not have emotions that are directed towards God, one need only remember the tenets of his empiricism. That is, for an empiricist all our ideas come from observation. Hume, like Locke, thought that our observations were of just two sorts: external sensory perception and the introspective experience.

On such an account, the entire intellectual and conceptual repertoire of the understanding is made up of imagistic ideas that are quite literally copies of impressions from either our outer or inner sense. This is, of course, what distinguishes the empiricist tradition from rationalists like Descartes who posited non-imagistic 'purely intellectual' ideas to go alongside the sensation-derived images. It is important to understand that this is more than a prejudice toward one conception of 'idea' on Hume's part.

Just as we saw earlier how the logical structure of the grouping of the intentional objects of the emotion-types gives them an internal coherence and makes the emotions of others interpretable by us, Hume sees the constraints on what emotions are *about* as crucial to our ability to understand the world and even to our sanity. Human beings are both sapient and sentient, but our capacities to think and feel are markedly finite. This makes it important that we have the 'habit of mind,' to use a

Humean phrase, that pulls our emotional attention back to the realm of immediate and familiar experience. This 'natural tendency towards parochialism in our sentimental attitudes,' as Holden puts it (2000: 72), grounds our thinking in an essential way. Otherwise, our passions would be susceptible to feverish flights of fancy buffeted by every passing thought of good or evil:

[D]id every idea influence our actions, our conditions wou'd not be much mended. For such is the unsteadiness and activity of thought, that the images of every thing, especially of goods and evils, are always wandering in the mind; and were it mov'd by every idle conception of this kind, it wou'd never enjoy a moment's peace and tranquility (2000: 1, 3, 10, p. 82).

Along with avoiding such potentially maddening distractions, having our emotional attention restricted in this way has the related benefit of making it more likely that we complete the tasks we set out to accomplish: 'It is wisely ordained by nature, that the private connexions should commonly prevail over universal views and considerations; otherwise our affections and actions would be dissipated and lost, for want of a proper limited object' (Hume 1998: 5, 42, p. 44 note).

So now we can see *why* human beings have the objects of their emotions limited in this way, the next step is to see what the consequences of such constraints are on our ability to make judgments about the moral character of God. Hume's argument includes a helpful analogy of a distant ancestor for whom, like God, we lack an appropriate representation from either the sense or the imagination with which we might be able to direct our emotions:

It must be acknowledg'd that Nature has given us a strong Passion of Admiration for whatever is excellent, & of Love and Gratitude for whatever is beneficial, & that the Deity possesses these Attributes in the highest Perfection & yet I assert he is not the natural Object of any Passion or Affection. He is no Object either of the Senses or Imagination, & very little of the Understanding, without which it is impossible to excite any Affection. A remote Ancestor who has left us Estates & Honours, acquir'd with Virtue, is a great Benefactor, & yet 'tis impossible to bear him any Affection, because unknown to us; tho in general we know him to be a Man or human Creature, which brings him vastly nearer our Comprehension than an invisible infinite Spirit. A man, therefore, may have his Heart perfectly well disposed towards every proper & natural Object of Affection, Friends, Benefactors, Countrey, Children Etc, & yet from this Circumstance of the Invisibility an Incomprehensibility of the Deity may feel no Affection towards him. ... Please to observe, that I not only exclude the turbulent Passions, but the calm Affections. Neither of them can operate without the Assistance of the Senses, & Imagination, or at least a more compleat Knowledge than we have of the Deity (Hume 1954: 13).

On this account the lack of detailed mental representation of God makes it psychologically impossible for a human being to have a passion that is directed towards that divine being. And given that any moral judgment of the form, 'That thing/person/being is *good*,' will have such a passion as a necessary component, no judgment of that sort concerning God is possible. In other words, one of the consequences of taking Hume's sentiment-based ethical system as your starting point is that it ends up being impossible to make the judgment that God is morally praiseworthy. Returning to Holden's analysis, this point about the objects of our passions turns into the first premise of an argument for what was introduced earlier under the label of 'Hume's moral atheism.' Here is that argument:

- 1. The diety is not a natural object of any human passion.
- 2. Moral sentiments are a species of human passion.
- 3. If a being is not a natural object of the moral sentiments, then it cannot have moral attributes (either vices or virtues).

Therefore, the deity cannot have moral attributes (either vices or virtues).

So we must conclude this investigation of our research question – Is a worldview which emphasizes the importance of emotions likely to raise theological concerns to a higher position than they would be if one embraced a worldview which emphasizes the importance of reason? – with a negative answer in this case. We can see that centering one's account of ethics on sentiment as opposed to reason does not *in itself* make ethics more amenable to traditional theological considerations.

Lessons Learned and Possible Alternatives

It is, of course, not just the fact that Hume's ethical system is sentiment-based that leads him to the striking conclusion that God lacks moral attributes. Several controversial tenets from Hume's empiricist epistemology also contribute to the process and result. I mentioned in passing above that Descartes and other rationalist philosophers posit purely intellectual ideas that are not dependent on either sensation or reflection in the way that Hume insists all ideas are. And one might well try to use Descartes' *The Passions of the Soul* as the starting point for a similar sort of investigation into our research question, though there are far fewer resources for progress on ethical theory in that text.

For another possible point of departure, one might also return to the contemporary and friend of Hume mentioned briefly above, Adam Smith. While it is fair to say that Smith's own sentiment-based account of ethics has attracted fewer admirers than Hume, in the current context Smith's less constrained notion of the possible objects of our emotions might be attractive. You will recall that, for Hume, sympathy functioned almost as a contagion, such that someone's sour or contented mood will tend to have us feeling the same way once we perceive their frown or smiles, for instance. For Smith, things are less automatic and sympathy appears to involve a kind of pre-cognitive judgment of appropriateness. Consider the following case where Smith imagines us failing to sympathize with another's fury:

The furious behavior of an angry man is more likely to exasperate us against himself than against his enemies. [If] we are unacquainted with his provocation, we cannot bring his case home to ourselves, nor conceive anything like the passion it excites (Smith 1976: 1, 1, 7, p. 11).

And this holds for positive as well as negative emotions according to Smith:

[If] we do not entirely enter into, and go along with, the joy of another, we have no sort of regard or fellow-feeling for it. The man who skips and dances about with that intemperate and senseless joy which we cannot accompany him in, is the object of our contempt and indignation (Smith 1976: 1, 3, 1, p. 44).

Smith explains that this is due to the fact that, unlike Hume, the starting point is not the perception of the expression of the passion in another person, but rather our more general understanding of their situation that is the catalyst for the sympathetic reaction:

Sympathy, therefore, does not always arise so much from the view of the passion, as from that situation which excites it. We sometimes feel for another, a passion of which he himself seems to be altogether incapable ... We blush for the impudence or rudeness of another, though he himself appears to have no sense of impropriety of his own behavior; because we cannot help feeling with what confusion we ourselves should be covered, had we behaved in such a manner (Smith 1976: 1, 1, 1 p. 12).

More work would need to be done to see whether Smith's less perceptuallybased account of the origin of sympathy can be built up into an account of ethics that leads to a positive answer to our research question. That project must wait for another time.

So there are other options for trying to use an emotion-centered approach to ethics as a starting point which might lead to a context more amenable to theological concerns than what we found with Alexander Rosenberg's scientism. But it is an informative datum that the philosopher who made the most progress toward building a system of ethics based on sentiment as opposed to reason, ended up with an account so rooted in the specifics of *human* emotionality and moral judgment that the moral agents in his system are effectively cut off from God in a very striking way. That is, they can neither have any emotions that are, properly speaking, *about* God and nor are they in a position to judge God as morally praiseworthy. Any theorist who wishes to get closer to a yes answer to our research question within the realm of ethical theory must find a way around Hume's empiricist epistemology and the specific constraints that his philosophical psychology puts on the range of things towards which our emotions can be directed.

Bibliography

- Blackburn, S. (1998). *Ruling passions: A theory of practical reasoning*. Oxford: Oxford University Press.
- Descartes, R. (1989). The passions of the soul (S. H. Voss, Trans.). Indianapolis: Hackett Publishing Company.
- Holden, T. (2010). Spectres of false divinity: Hume's moral atheism. Oxford: Oxford University Press.
- Hume, D. (1954). In R. Klibansky & E. C. Mossner (Eds.), New letters of David Hume. Oxford: Clarendon.

- Hume, D. (1998). In T. L. Beauchamp (Ed.), *An enquiry concerning the principles of morals*. Oxford: Oxford University Press.
- Hume, D. (2000). In D. F. Norton & M. J. Norton (Eds.), *A Treatise of Human Nature*. Oxford: Oxford University Press.
- Kant, I. (1959). Critique of practical reason (L. W. Beck, Trans.). New York: MacMillian.
- Kant, I. (1996). *Groundwork of the metaphysics of morals* (M. Gregor, Trans.). Cambridge: Cambridge University Press.
- Kenny, A. (1963). Action, emotion and will. London: Routledge and Kegan Paul.
- Rosenberg, A. (2014). Disenchanted naturalism. In B. Bashour & H. D. Muller (Eds.), *Contemporary philosophical naturalism and its implications* (pp. 17–36). New York: Routledge.
- Smith, A. (1976). In D. D. Raphael & A. L. Macfie (Eds.), *The theory of moral sentiments*. Oxford: Oxford University Press.
- Spencer, H. (1954). Social statistics: Or, the conditions essential to happiness specified and the first of them developed. New York: Robert Schalkenbach Foundation.

Hans D. Muller is an Associate Professor of Philosophy at the American University of Beirut. His main research interests are the philosophy of mind and cognitive science, but he also works on eighteenth century philosophy (especially the Scottish Enlightenment) as well as ethics and logic. He recently co-edited (with Bana Bashour) the book *Contemporary Philosophical Naturalism and Its Implications*, which was published in 2014 as part of the series *Routledge Studies in the Philosophy of Science*.

Index

A

- Abelard, Peter, 36, 208 Absolution, 205 Adaptation, 13, 112, 134, 136, 168, 263 Admiration, 43, 287, 288, 294 Affect, 13-16, 18-20, 42, 43, 45, 47, 51, 54, 61, 64, 113, 121, 124, 126, 166, 195, 198, 206, 220, 224-227, 231, 232, 254, 267, 269, 274, 292 Affection, 88, 91, 160, 162, 167-169, 225, 226, 229–231, 275, 288–290, 293, 294 Aggression, 37, 45, 68, 254 Ainsworth, M., 1, 10, 11, 15, 16 Alcuin of York, 35 Altruism, 43, 92, 94, 134, 137 Amusement, 202 Amygdala, 45, 48, 194 Anger, 2, 13-16, 19, 28-30, 33, 37, 43, 45, 47, 62, 63, 124, 161, 167–169, 177, 183, 202, 203, 214, 227, 254, 257, 264, 266, 274, 280, 287 Angst, 169, 194, 289 Anguish, 4, 30, 38, 168–171, 174, 215 Animism, 128 Anselm of Canterbury, 36 Anthropology, 128, 161, 173, 174, 206, 208, 212, 215, 217, 219 Anti-compassion, 88–91, 95 Antipathy, 160 Anxiety, 2, 29, 30, 36, 47, 52, 80, 139, 159, 160, 169-171, 193, 194, 208, 214, 257, 268, 271, 289 Apprehension, 160, 169, 227, 229, 230, 237, 246, 271
- Archaeology, 134, 135, 137 Arendt, H., 151, 271 Aristotle, 90, 91, 153, 154, 275, 278 Artificial intelligence, 22 Atheism, 6, 284, 291, 295 Atonement, 2, 27, 34–37, 208, 209 Attachment theory, 1, 9–12, 16, 22, 23, 204 Augustine, St., 32, 33, 69, 74, 76, 77, 81, 82, 84, 180, 184, 253, 254, 257, 261, 269, 271 Awe, 214, 217

B

- Babies, 105, 106, 112, 139
- Barrett, J., 122, 126–128, 134
- Beauty, 31, 69, 82, 159, 166, 193, 224, 226, 229, 230
- Belief, 1, 3, 18, 23, 30, 50, 54, 77, 93, 94, 121–127, 129, 154, 196, 218, 220, 225, 226
- Betrayal, 29, 34, 161, 170, 173, 219
- Bhagavad Gita, the, 31
- Bianco di Siena, 84
- Bible, the, 4, 31, 49, 77, 159, 161–163, 165, 168, 173, 208, 236, 242
- Bitterness, 65, 161, 169, 179, 268
- Bliss, 149–154, 169, 197
- Blood, 31, 33–35, 100, 167, 168, 170, 186, 187, 242
- Böll, H., 171
- Bonding, 189, 193-195, 198
- Bowels, 166–168, 171, 174
- Bowlby, J., 1, 10, 11, 20, 22

© Springer International Publishing Switzerland 2016

D. Evers et al. (eds.), *Issues in Science and Theology: Do Emotions Shape the World?*, Issues in Science and Religion: Publications of the European Society for the Study of Science and Theology 3, DOI 10.1007/978-3-319-26769-2

Boyer, P., 121, 122 Brain, 3, 12, 28, 29, 31, 43, 45, 46, 48, 54, 64–66, 88, 99–102, 104–112, 133–140, 179, 180, 185, 194, 198, 262 plasticity, 28 Brodmann area 2, 109 Buddha, 23, 50 Buddhism, 48, 128, 205, 216

С

Calvin, J., 177, 185 Categorization, 120 Centering prayer, 48–49 Charlemagne, 34, 35 Child-rearing, 134 Chimpanzee, 62, 100, 101, 136, 137 Christ, 31-36, 50, 74, 78-81, 161, 166, 170, 171, 178, 185, 186, 188, 209, 237 Christianity, 2, 5, 18, 34, 37, 48, 76, 80, 127, 182, 185, 198, 224, 237, 241, 252, 253, 257, 258, 260, 265, 267, 270 Church, 20, 32, 33, 35-37, 69, 76, 78, 158, 184, 236, 238, 240, 261 Coakley, S., 76, 78-84, 206, 229 Codes of conduct, 3, 4, 143-155 Cognition, 13, 22, 23, 88, 180, 194, 203, 204, 206, 216, 217, 220, 231, 253, 262, 275, 279, 280 Cognitive science of religion (CSR), 3, 5, 119-130, 134, 135, 204, 217 Commodification, 146, 147 Community, 2, 30-33, 38, 43, 68, 91, 145, 181, 204, 205, 285, 290 Compassion, 3, 33, 43, 48-52, 54, 87-95, 114, 160, 166, 171, 172, 177, 183, 187, 191, 236, 256, 262, 264, 265, 271 Compensation, 19-21 Conceptual bias, 128 Conscience, 31, 38, 45, 91, 146, 147, 149 Consumerism, 74 Contempt, 43, 160, 202, 296 Contentment, 152, 202 Contrition, 2, 29, 33 Conversion, 35, 37, 85, 190, 220, 227, 230 Costly signalling theory, 3, 120, 123–124, 129 Courage, 33, 50, 167, 180, 290 Cowardice, 28, 33 Cruelty, 90, 160, 183 Crusades, 36 Crying, 14, 112, 174 Culture, 4, 51, 53, 62–64, 95, 113, 114, 173, 182, 184, 192, 194, 205, 209, 216, 252, 255

D

- Damasio, A., 43, 135
- Dante, 2, 77, 78, 81, 269
- Darwin, C., 2, 62, 76, 77, 82
- Deceit, 33
- Delight, 78, 164, 192, 224, 226, 229
- Depression, 17, 29, 45, 47, 54, 102, 161, 166, 190, 194–196, 198, 199
- Descartes, R., 293, 295
- Desert Fathers, the, 74
- Desire, 2, 4, 74–85, 88, 134, 148, 160, 161, 163–166, 172–174, 179, 187, 195, 207, 257, 261, 287
- Desolation, 167, 169, 171
- Despair, 33, 149, 150, 171, 199, 290
- Determinism, 22
- Development, 1–3, 9, 10, 12, 14, 16, 22, 45, 60, 63, 84, 121, 128, 135, 152, 163, 172, 185, 195, 203, 204, 207, 211, 212, 216–220, 258, 264, 268, 270, 276, 277, 281
- Dialogue, 5, 140, 161, 206, 207, 236, 237, 243–246
- Dignity, 3, 88-91, 256
- Discernment, 178-183, 185, 186, 268-270
- Disgust, 13, 29, 43, 62, 63, 109, 110, 160, 184, 202, 204, 206, 208, 214, 266
- Disinterest, 160
- Displeasure, 160
- Distress, 10, 13, 14, 18, 20, 22, 88, 112, 166, 169, 170, 208, 237
- Dopamine, 29, 45, 195, 198
- Dostoevsky, F. M., 197
- Dread, 34, 86, 169, 287
- Duchenne de Boulogne, G., 60
- Duty of care, 144, 155

Е

- Ecclesiastes, 78
- Ecstasy, 78, 169, 193, 198, 208
- Ecstatic-mystical states (EMS), 190–192, 194–198
- Edwards, J., 223-232
- Ego death, 4, 190–19, 199
- Ego deflation, 190, 194–198
- Elation, 29, 169, 193, 194, 197
- Eliot, T. S., 75
- Embarrassment, 92, 202, 204, 207
- Embodiment, 146, 181, 229, 231, 279
- Emergence, 27, 35, 77, 106, 107, 185, 204, 207, 213, 230

Emotion

collective, 214

negative, 5, 14, 15, 65, 66, 69, 215, 216, 219, 220, 296 positive, 14, 16, 61, 65, 216-218, 268, 269 Emotionality, 14, 122, 123, 126, 134-137, 139, 140, 149, 161, 167, 173, 226, 286, 296 Empathy, 2, 3, 30, 33, 37, 43-46, 92, 94, 101, 108-114, 134, 161, 172, 191, 202, 204-206, 208, 214, 262 Empirical method, 274, 279, 280 Enjoyment, 2, 61, 66, 169, 214 Enlightenment, 6, 37, 73, 127, 190, 232, 256, 260, 261, 270, 284, 286 Environment, social, 114, 122 Envy, 13, 33, 161, 167, 168, 220, 258, 293 Ephrem of Svria, St., 32 Epilepsy, 109, 196-198 Epistemology, 162, 224, 275, 277, 289, 295.296 Eros, 76, 160, 161, 165, 195, 198, 264, 270 Ethics phenomenological, 149, 154 Ethology, 60, 62, 66 Eucharist, 31-37 Evagrius, 74 Evolution, evolutionary theory, 10, 46, 62, 77,

- 83, 106, 114, 133–140, 202–204, 207, 216, 253–255, 265
- Exasperation, 169
- Excitement, 139, 160, 202

F

Facial Action Coding System (FACS), 61, 66

Faith, 5, 18, 19, 22, 23, 29, 30, 37, 85, 161, 164, 177, 178, 184, 187, 194, 205, 212, 216–218, 220, 235–246, 258, 260, 268, 270

- Fall, the, 5, 76, 84, 207, 257, 261, 269, 270
- Fear, 13–16, 20, 28, 29, 33, 36, 37, 43, 45, 47, 50, 53, 62, 63, 77, 84, 91, 121, 139, 160, 165, 167, 169, 170, 172, 197, 202–204, 206, 208, 214–216, 227, 239, 254, 280, 289, 292, 293
- Feeling, 4, 18, 29, 46–48, 61, 67, 69, 88, 92, 93, 108, 109, 112, 135, 136, 143–155, 162, 163, 166, 171–173, 181, 194, 195, 197, 226–229, 232, 245, 252, 256, 260, 266–268, 271, 274–280, 289, 292, 296
- Fetishism, 128
- Forgiveness, 4, 32, 36, 178, 184, 205, 217
- Formation, religious, 261
- Francis of Assisi, St., 258
- Francis, Pope, 172

- Freedom, 17, 79, 80, 145, 150, 171, 209, 217, 218 Freud, S., 76, 77 Friendship, 30, 155, 182 Functional Magnetic Resonance Imaging (fMRI), 100, 108, 111 Fury, 167–169, 295
- G
- Generosity, 32, 33, 42, 77, 79, 191, 236
- Genesis, 32, 159, 207, 209, 261
- Genetic fallacy, 21
- Genetics, 54, 106, 114, 134–136, 140, 213, 215
- Gestalt, 4, 194, 195, 199
- Ghandi, M., 182
- Global challenges, 140
- God, 1, 2, 4–6, 9, 16–22, 29, 30, 32–37, 48–50, 69, 74–85, 125, 150–152, 154, 161, 164–168, 171–174, 177, 178, 182–187, 191–193, 195, 198, 204–208, 217, 224–226, 229, 230, 238–240, 243, 245, 252, 256–260, 263, 268–271, 291–296
- 'Golden rule', 3, 94, 95, 114
- Goodness, 69, 77, 78, 89, 154, 159, 173, 238, 256
- Gorilla, 62
- Gospel, 32, 82, 183, 184, 237, 244, 268, 287
- Gould, S.J., 265
- Grace, 81, 178, 193, 219, 220
- Gratitude, 33, 36, 294
- Great Awakening, 224
- Greed, 33, 93, 242, 246, 258
- Grief, 2, 29, 33, 50, 166, 168, 256
- Guilt, 2, 5, 13, 15, 16, 19, 29, 33, 36, 45, 77, 111, 162, 178, 202, 204–209, 214, 215, 217, 218, 267, 268, 270, 271, 287

Н

- Happiness, 2, 13–15, 61–63, 110, 124, 152, 155, 169, 202, 203, 214, 261, 274, 290, 291
- Haptic engagement, 182
- Hatred, 33, 160, 161, 167, 169, 183, 203, 287, 288, 290
- Heart, 4, 5, 12, 17, 28–30, 36, 38, 49, 74, 77, 80, 82, 85, 94, 135, 162–170, 173, 174, 178, 184, 186, 191, 206, 224–227, 229–232, 236, 240, 245, 274, 288, 294
- Hebb, D., 102, 104
- Hebbian learning, 102-108

Hermeneutics, 4, 193-196, 209, 212 Hesychia, 48-49 Hinduism, 128 Hippocampus, 28, 194 Hippocratic oath, 144 Holiness, 73, 224 Holy spirit, 69, 81, 186 Homeostasis, 42, 43, 45, 50 Hominins, 3, 134-137, 139, 140 Homo sapiens, 42, 65, 134, 135, 137, 256, 262 Honesty, 144, 155, 238, 270, 286 Hope, 37, 46, 47, 69, 81, 85, 122, 139, 140, 147, 151, 166, 204, 205, 217, 231, 268, 286, 292 Hopelessness, 50, 193 Horror, 29, 38, 82, 91, 160 Hosea, 78, 172 Hospitality, 183, 187 Hostility, 169, 170, 183, 263 Hubris, 202, 244 Human specificity, 217 Hume, D., 6, 284, 286-296 Humiliation, 29

I

Humility, 33, 219, 268

Ignatius of Lovola, St., 253, 267 Imagination, 36, 48, 52, 53, 85, 91, 182, 187, 237, 241, 242, 246, 259, 263, 268, 289, 293, 294 Impartiality, 144, 155 Impassivity, 4 Incarnation, 27, 31, 32, 35, 36, 161, 169, 173 Indifference, 91, 160, 170 Infinitizer, 246 Ingold, T., 180-182 Insecurity, 11, 21 Instinct, 160, 161, 179, 187, 230 Insula, 109, 110, 194 Intelligence, 22, 46, 134, 140 Intentionality, 227, 292, 293 Internal family systems (IFS) therapy, 47, 49-51, 54, 55 Internal working model (IWM), 10, 11, 18, 19, 22 Intuition, 178, 183, 186, 259, 271, 274, 275, 277, 278, 280, 281 Ire, 167-169 Irritation, 167, 169 IWM. See Internal working model (IWM)

J

Jealousy, 161, 168, 171-173, 202, 207, 256, 257, 280, 292 Jeremiah, 161, 166, 171 Jesus, 4, 31, 32, 34-36, 42, 48, 78-81, 83, 160, 166, 168-171, 173, 178, 185, 208, 243, 244, 287 Job, 78, 147, 148, 152, 153, 161, 167, 169, 171, 173, 226, 240, 287, 288 John of the Cross, St., 4, 191, 198, 267 Joy, 2, 13, 14, 43, 46, 61-63, 67, 69, 113, 152, 160, 161, 166, 167, 171, 184, 185, 192, 193, 197, 199, 216, 258, 274, 296 Judaism, 18, 31 Julian of Norwich, 258 Jung, C.G., 198 Justice, 2, 32, 33, 69, 80, 168, 185, 187, 208,

K

256, 271

Kant, I., 89, 90, 149–151, 153, 154, 277, 278, 284
Kenosis, 190, 192, 193
Kierkegaard, S., 169
King, M.L, 128, 161, 162, 182
Kuhn, T.S., 277, 278

L

Language, 2, 49, 62-64, 74, 78-80, 84, 85, 94, 106, 123, 160, 165-167, 169, 172, 180, 183, 212-214, 218, 220, 236, 239, 240, 243, 246, 271, 273-276, 279-281, 288 Laughter, 62, 63, 69, 161 Leavis, F. R., 242 Leopardi, G., 162 Levinas, E., 151, 246 Lewis, C.S., 13, 75, 80, 202, 245 Limbic system, 43, 88 Logic, 94, 256, 258-260 Logos, 198, 275 Loneliness, 169 Longing, 2, 42, 73-85, 93, 165, 220 Lord's Prayer, 80 Love, 1, 4, 13-16, 18, 20, 21, 25, 32, 33, 36-38, 43, 47, 69, 74, 77-85, 114, 139, 152, 155, 161, 165, 166, 171-173, 177, 182, 189-196, 198, 199, 204, 217-219, 238, 242, 257, 259, 264, 265, 267, 268, 270, 280, 287, 288, 290, 294 Loyalty, 45, 145, 177, 257 Lust, 29, 33, 81, 84, 161, 258

М

Maimonides, 259, 268 Mandela, N., 182 Manipulation, 63, 136, 271 Marcus Aurelius, 255 Marx, K., 184 Matrix thinking, 134, 135, 140 McLuhan, M., 162 Meditation, 2, 47-48, 51, 54, 126, 192, 236 Meister Eckard, 267 Melancholy, 169, 203, 290 Mercy, 36, 90, 91, 166, 167, 172, 219, 243 Merton, R., 49, 144, 145, 147, 148 Merton, T., 49, 144, 145, 147, 148 Metaphor, 49, 167, 183, 191, 192, 199, 237, 238, 244, 253, 256, 263–265, 269 Midgley, M., 252, 254, 256, 260, 261, 263-266, 269, 271 Military veterans, 27–29 Mindfulness, 47–49, 54 Mirror neurons, 3, 63, 64, 68, 99, 102, 104 - 108Mithraism, 125 Modernity, 135, 179, 238 Monkey, 62, 99, 100, 104, 109, 136, 137 Moral injury, 1, 2, 27-38 Morality, 6, 111, 113, 143-155, 163, 207, 260, 284-287, 289-291, 293 Moses, 171, 239 Murdoch, I., 263 Mystery, mystical states, 35, 48, 183, 238, 241

Ν

Nanotechnology, 140 Narcissism, 191, 206, 268, 271 Natural selection, 45, 134, 136, 139, 289 Nausea, 160 Neocortex, 43 Neoplatonism, 257 Nervousness, 169 Neurons, 3, 63, 64, 68, 99, 100, 102, 104–108 Neuroscience, 28, 45, 55, 99, 262, 279, 280 Newberg, A., 192, 193, 196 New Testament, 69, 74, 79, 163–167, 170, 172, 237, 287 Nietzsche, F., 193 Nurture, 42, 266

0

Old Testament, 163, 164, 168 Orangutan, 62 Organs, 4, 165–168, 174 Origen, 159, 208 Oxytocin, 195, 198

P

Pain, 10, 46, 47, 50, 53, 54, 64, 88, 91, 92, 109-113, 150, 166, 169, 174, 178, 183, 259, 261 Parietal cortex, 109 Parkinson's disease, 66 Pascal, B., 121, 274 Passion, 35, 155, 160-165, 167, 169, 171-174, 192, 274, 287-290, 292-296 Patience, 16, 177, 239, 245 Paul, St, 61, 62, 66, 69, 79, 164, 166, 168, 173, 194, 208, 209, 241 Penance, 2, 31, 33, 35, 36 Pentecostalism, 184 Petrarch, 81 Phenomenology of feeling, 4, 143–155 Philosophical explanation, 276 Philosophy, 5, 74, 89, 90, 92, 93, 127, 144, 154, 182, 206, 229, 252, 258, 260, 263, 265, 269, 271, 275, 276, 279, 280, 285, 289 Pietism, 184 Pity, 289 Plantinga, A., 224-226, 231 Plato, Platonism, 74, 76, 77, 81, 89, 264 Play, 2, 43, 53, 62, 63, 93, 94, 111, 113, 124, 136, 137, 139, 140, 179, 194, 201, 203-206, 209, 220, 231, 240, 252, 271, 277, 280 Pleasure, 2, 61, 69, 78, 150, 152, 160, 169, 198, 202, 214, 259 Poetry, 5, 77, 235-246 Polanyi, M., 279 Popper, K., 276–279 Post-traumatic stress disorder (PTSD), 1, 2, 27-31, 230 Prayer, 2, 17, 19, 31, 33, 47-49, 54, 79, 80, 85, 126, 170, 174, 204, 205, 235, 236, 238, 239, 245 Prefrontal cortex, 28, 43, 45 Premotor cortex, 99, 100, 109 Pride, 13, 15, 43, 93, 191, 202, 204, 205, 220, 258, 268 Prinz, J., 5, 113, 227-232 Pro-compassion, 90-91, 94, 95 Psalm, 32, 161, 165, 167, 168, 170, 171, 240

Pseudo-Dionysius, 78 Psychology, 10, 12, 22, 61, 74, 77, 90, 125, 134, 173, 180, 203, 206, 209, 262, 267, 268, 271, 279, 284, 286, 289, 292, 293, 296 of religion, 10, 22, 77, 203, 209 Psychopathy, 2, 44–46, 111–113 Psychotherapy, 47, 49, 51

PTSD. See Post-traumatic stress disorder (PTSD)

R

Radbertus, 34, 35 Rage, 13, 28, 167 Ramsev, I. Rationality, 5, 6, 163, 165, 206-208, 224, 254, 256, 258, 260, 262, 263, 270, 274-279 Rationalization, 126, 129 Reason, 5, 6, 11, 22, 36, 69, 88, 89, 91-93, 95, 126, 140, 144, 147, 150, 163, 167, 168, 172, 189-199, 202, 225-227, 231, 236, 238, 245, 251-271, 273-281, 284-288, 290, 291, 295, 296 age of, 252, 258–260 Rebirth, 190-192 Reconciliation, 2, 261 Reductionism, 185, 280 Rehabilitation, 2 Relationships, 5, 14, 16–20, 23, 30, 31, 46, 51, 52, 67, 75, 77, 80, 83, 84, 113, 122, 126, 152, 163, 171, 172, 178, 180-186, 204, 236, 237, 239, 246, 257, 274-276, 281, 285 Relief, 196, 202 Religion, comparative, 127 Religiosity, 20, 121–129 Religious experience, 136, 152, 189, 190, 215 - 217Remorse, 29, 33, 44, 162, 178, 293 Repentance, 2 Repugnance, 160 Respect, 15, 17, 29, 38, 77, 84, 146, 149, 150, 161, 165, 191, 214, 264, 265, 276, 285, 288.291 Restlessness, 169 Resurrection, 27, 32, 36, 236, 237, 243 Revelation, 160, 193, 216, 220, 237 Rhetoric, 160, 167 Robot, 101 Romans, letter to the, 79, 84, 208 Rousseau, J. J., 90, 91, 93

S

Sacrifice, 32, 33, 35, 36, 93, 112, 151, 167, 168 Sadness, 13, 43, 45, 63, 69, 150, 161, 169-171, 202, 203, 210, 280 Salvation, 31, 36, 37, 73, 169, 170, 184, 185, 209, 219, 220, 244 Satisfaction, 61, 67, 152, 169, 202, 208, 214 Scheler, M., 4, 144-146, 148-154 Schopenhauer, A., 90, 91, 262, 263, 265 Scientism, 241, 242, 284-286, 296 Security, 10, 11, 15, 18, 21, 73, 83 Self-awareness, 134, 270 Self-transcendence, 78, 83, 84 Seneca, 89, 91, 255 Sentience, 3, 134-137, 139, 140 Serenity, 168, 197, 290 Sex hormones, 29 Shame, 2, 5, 13, 15, 16, 19, 29, 33, 43, 45, 47, 50, 53, 55, 84, 89, 92, 202, 204, 205, 208, 214, 215, 218, 268, 270, 271, 287 Sin, 31, 33, 35, 36, 69, 76, 77, 84, 161, 164, 184, 204, 207, 220, 230, 261, 271 Skepticism, 277, 278, 291-295 Smile fake, 60, 61, 65, 66, 69 genuine, 2, 61, 62, 65, 67–70 Smiling, 2, 14, 32, 47, 61-67, 124 Smith, A., 17, 74, 90, 91, 120, 127, 287, 288, 291, 295, 296 Sociability, 136, 137 Social brain hypothesis, 136 Social brain network, 136 Somatic marker, 135, 190 Song of Songs, 36, 74, 77, 83, 165, 166, 172 Sorrow, 36, 169, 171, 228 Soteriology, 2, 31-33, 206, 208 Spinoza, B., 89, 258, 259, 261–263, 269 Spirituality, 140, 151, 197, 217, 229, 252, 267-269 Spiritual knowledge, 223-232 Star Trek, 5, 252, 255, 256 Steadfastness, 33 Stoicism, 74, 252, 255, 257, 270 Strasser, S., 146, 152-155 Suffering, 2, 27, 29, 32, 34, 36-38, 46, 90-93, 112, 113, 161, 166, 170, 183, 240, 257

- Surprise, 13, 33, 62, 63, 181, 202, 276
- Sympathy, 88, 91, 134, 160, 289–291, 295, 296

Т

Taste, 109, 164, 179, 230 Taylor, C., 144, 151 Technology, 5, 139, 140, 145, 146, 184, 240-243, 246 Tenderness, 4, 111, 160, 166, 169, 171 - 174Terror, 28, 36, 55, 162, 166, 167, 169, 170, 193, 203 Theology, 4, 6, 17, 27-38, 69, 125, 127, 159-174, 177, 184, 187, 201-209, 211-220, 224, 229, 257, 258, 260, 261, 283-296 Theory of Mind (ToM), 94, 95, 121, 203 Theosis, 32, 33, 38 Therapy, 2, 30, 31, 50-54, 195 Theresa of Avila, St., 267 Thérèse of Lisieux, St., 81 Thomas Aquinas, St., 114, 154, 254 Thomas, R. S., 5, 48, 49, 114, 154, 235-246, 254, 277, 287 Tillich, P., 194 Touch, 4, 34, 105, 108–110, 178–180, 183, 187, 192, 288 Transcendence, 77, 78, 83, 84, 169, 183, 186, 217, 220 Trauma, 11, 27, 28, 30, 31, 34-38, 49.52.53 Trent, Council of, 261 Trinity, 35, 79, 258

Trust, 13–15, 33, 84, 91, 110, 155, 178, 187, 214, 285 Tutu, D., 182, 183

U

Unworthiness, 29, 208 Urban II, Pope, 35, 36

V

Value ethics, 146 Violence, 28, 30, 33, 34, 36, 38, 45, 51, 93, 161, 169, 173, 240, 242, 244, 246, 255 Virtue ethics, 31

W

Wainwright, W., 225–227
War, 2, 27, 29–31, 33, 34, 36–38, 144, 151, 243, 255, 261
Wisdom, 33, 134, 164, 182, 236, 262, 269, 271
Wonder, 136, 192, 194, 217, 241
Worship, 31–33, 85, 168, 236
Wrath, 167–169, 171, 173, 258

Z

Zen, 190