

A VOLUME IN
STUDIES IN THE PHILOSOPHY OF EDUCATION

Technologies *of* Government

*Politics and Power
in the
“Information Age”*

Benjamin Baez

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A volume in
Studies in the Philosophy of Education
John E. Petrovic, Series Editor

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Benjamin Baez

Florida International University



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Foreword

Forming Rationalities, Governing Selves

Aaron M. Kuntz

The University of Alabama

When driving home this past August, I came across an episode of *Here and Now* on the radio that asked whether people should “own” and subsequently be paid for the data they produce on the Internet. Though ostensibly in reaction to recent revelations about the National Security Agency’s (NSA) history of gathering data on our citizenry, the discussion quickly shifted to the inevitability of technological advancement and the increased ability for huge computers to “suck up” data, engage in large-scale predictive computations, and encourage particular political practices and identifications. More than creating databases of buying trends from select consumers, these computer servers are already used by presidential candidates to determine policy positions and predict voting outcomes. Soon it may come to be that, as host Robin Young noted, “The candidate with the biggest server wins.” Further, there lies a seductive quality to these technologies. Again, host Robin Young: “They’re so—they can’t be resisted, because they’re just so compelling, this idea that you could have all this data.” The guest, computer scientist Jaron Lanier, responded to these seductive elements by stating, “I don’t want to live in a democracy where computation is what, you know, determines election results.” Politics in the information age, indeed.

What struck me about this discussion was not so much the power of technology to predict human behavior or even the potential for me to make a few bucks by requiring governments and private companies to pay for the data I (un)knowingly produce as I surf the Internet (“my data” as the show would have it). Instead, I was taken by the easy conceptual slip-pages throughout the interview: *data* was easily substituted for *information* and information for *knowledge*, *ownership* of data as a proxy for *individual agency*; *data mining* as *democratic action*. Never throughout the course of the interview was the rationale that made databases possible or data themselves representative of human lives questioned. Data—and the databases that organize them—just . . . were. It was as though data were some natural formation of our evolutionary advancement within our information age. The main question throughout the interview was inevitably “who owns the data?”—who owns the multitude of electronic bits that, when expanded out to the level of population, predicts our health and behavior? Data were offered as extensions of selves (I produce the data, that data is mine, why should others be able to use it without compensating me?), as some organic extension of our daily acts of living. Taking ownership of one’s data was presented as a democratic act, an extension of our liberal rights as citizens. In this sense, if there was a political issue at hand, it was one that dealt with who gets access to, manages, and interprets the information streaming into and out of the database. As a technology, the database itself was rendered neutral—an inevitable apolitical effect of our unending technological advancement. The database exists as a technology *and* more than a technology: making practices possible, enforcing particular epistemological formations (what we can know), and asserting ontological claims regarding what is, the very realities to which we respond day in and day out.

This is not to critique the show’s host or guest, but to rather point out that these assumptions are (to paraphrase Michel Foucault) not bad, as such, but dangerous. And if they are dangerous, then we (as critical scholars) always have something to do. With this as a backdrop, Ben Baez’s *Technologies of Government: Politics and Power in the “Information Age”* has something to do.

At its core, Ben’s book interrogates contemporary formations of the very rationalities that produce our social realities, make select practices possible, and ultimately, ourselves governable. Key to Ben’s claims throughout this book is the premise that formations of rationality become governable when they manifest at the level of the technical, enhanced or enabled by the subject formation of the *expert*. Further, as a managing technology, databases and other information technologies are fully ensconced within the political; only contemporary rationalities posit them as neutral and outside

the realm of the political. The *Here and Now* interview is thus emblematic of the main themes of Ben's overarching argument: the database stands in as a seductive technology, made useful by statistical interpretations of large-scale data, framed within a neoliberal model of economic determinism and accountability (Statistics, Database, Economy, and Accountability also happen to be chapters within this book).

What remains most interesting, of course, is when this critical analysis is brought to bear on education. That is, how might the contemporary formation of these technologies of government manifest within education? More specific to this book series, it is perhaps useful to consider Ben's critique against "central concepts in educational policies, pedagogic methods, curricula, and specific practices of schooling" as indicated within the series' front matter. Before doing so, however, I think it important to situate this text within the broader philosophical literature that informs Ben's critique.

At the core of his argument, Ben critiques strictly epistemological conceptions of knowledge in favor of more sociohistorical interpretations of knowing, coming to know, and being. In this way, Ben argues that knowledge is formed, constituted by an array of practices and strategies, governed by the rationalities that make them possible/visible/knowable. Through Ben's pointed critique, it is the database—as both enabling technology and governing rationality—that is newly made visible for critical analysis; the database is revealed as a sociopolitical knowledge formation. Here, knowledge is more than descriptive of social reality; it is productive, making select realities possible (and encouraging select interpretations and engagements within those same realities). Further, such knowledge formations are historical, dynamically colluding with developing social practices and subjectivities to create, among other things, contemporary *structures of feeling*—materially ensconced and socially shared experiences of being in the world.

The Marxist literary critic Raymond Williams understood *structures of feeling* as "social experiences in solution" (Williams, 1978, p. 133). Perhaps more easily understood, *structures of feeling* point to a shared experience of the very lived and felt moment of the present. Williams' metaphor of solution is perhaps helpful here, as it is the solution that holds, gives shape to, magnifies, and obfuscates that which exists within its boundaries. Drop liquid color into the otherwise translucent medium of a solution and the entire entity displays its effect—the color dissipates slightly, spreading throughout, simultaneously dulling from the point of contact and coloring that which it impacts. From the moment of impact one can no longer easily distinguish the drop from the solution, the cause from its effect. In many ways, then, these dynamic qualities provide a methodological quandary—how to conceptually engage with such ambiguity?

Inherent to any analysis of *structures of feeling* is the problem of understanding that which is an ongoing process, never fully formed. How does one critically engage with and understand a materially emergent cultural sensibility that is happening right now, (re)formed by the very governing ideologies one seeks to problematize? Williams noted this problem as a tension unto itself, “an unease, a stress, a displacement, a latency: the moment of conscious comparison not yet come, often not even coming” (Williams, 1978, p. 130). Contemporary *structures of feeling*, then, are always in an “embryonic phase” before they “can become fully articulate and defined” (Williams, 1978, p. 131). This becoming social feeling is alluded to throughout Ben’s text, governed by an emergent rationality that delimits and makes possible a contemporary *onto-epistemology*.¹ These, then, are the social anxieties that manifest within our contemporary time as well as those institutions, practices, and knowledge-formations aimed at managing such disquiet. Other authors have pointed to the social anxieties inherent in our postmodern, neoliberal time—*structures of feeling* that emerge from socio-historical assertions of fragmentation, hyperindividualism, and economic assertions of productive citizenship, to name but a few.² In this book, Ben points out that ours is a time when ways of coming to know collapse into formations of being; questions for who we are and what we do are informed (nearly answered) by the information we incessantly produce and offer up for analysis. As a means to more fully consider this cultural sensibility, Ben utilizes the database as an entry point for analysis, problematizing both the technology and the logic that makes it possible.

My point here is not to reduce Ben’s text to an elaborate description of *structures of feeling* but rather to recognize the difficulty of such social critique as well as nod to the philosophical heritage from which he writes. Of course, Williams thought it most helpful to situate his analysis within the area of literature, whereas Ben posits a series of sociopolitical relations, institutions, and practices as social *texts* that, when critically interrogated, reveal the very rationalities that govern our daily lives. Indeed, it is through his careful treatment of our “information age” that Ben makes visible what he terms the “society of the statistic” and the “data-basing of our lives.”

In many ways, Ben problematizes the very contemporary technologies that make society, in a Foucauldian sense, governable. Ben spends considerable time throughout this book explaining the Foucauldian elements of his critique so there is no need for me to paraphrase them here. However, the critical move of problematization as well as formations of biopower are important to understanding Ben’s theoretical engagement as well as the means by which he conducts his analysis.

For Foucault, *problematization* involves a degree of stepping back to make strange the familiar so that thoughtful analysis might engage otherwise unrecognized social processes and practices. As a means for doing so, one needs to create an “object of thought” that refuses to carry with it the baggage of *a priori* assumptions regarding knowing and coming to know. In this sense, problematization forgets the possibility of preconceived solutions to that which one examines.³ One engages in these acts, Foucault notes, through a type of what he termed “feverish laziness.” This is the momentary pause and recline necessary for one to step outside the momentum of normative knowing in order to make sense differently, all the while engaging in the work of critical interrogation. In this sense, Ben’s work is lazy indeed, refusing to carry with it the solutions of the very rationalities he, in turn, interrogates. Ben pauses the momentum of data-basing rationalities so that he can energetically engage in his critique.

Foucault’s notion of biopower points to circulations of power simultaneously making possible a hyperindividuation and statistically informed notion of population. As Foucault (2003) notes in his 1975 lectures, “the element that circulates” (p. 253) between the individual body and the multiplicity of population “is the norm . . . something that can be applied to both a body one wishes to discipline and a population one wishes to regularize” (p. 254). From the norm extends a state mechanism of control in the form of a type of state or population racism, a system of logic that articulates “the break between what must live and what must die,” the notion that “if you want to live, the other must die” (p. 255). Thus, population racism provides the logic behind the right to kill. And, as Foucault notes,

“Killing” here is about physical death and more: When I say “killing,” I obviously do not mean simply murder as such, but also every form of indirect murder: the fact of exposing someone to death, increasing the risk of death for some people, or, quite simply, political death, expulsion, rejection, and so on. (p. 255)

Here, biopower is more than abstract renderings of norms at the level of population; there are very material effects that extend from these normalizing logics. Within processes of biopower, one is forever marked through an ongoing relation to the statistically informed norms of population. Importantly, these markings are deeply political. As Clough and Willse (2010) write, the normalizing response is a product of conservative neoliberalist rationalities which “are not meant to produce behavior by individuals or groups so much as they are meant to produce affective states, states of attention or activation with indeterminate, albeit already to-be-sensed, future

effects” (p. 51). Obviously, then, formations of biopower with corresponding normalizing responses intersect in a productive way with those *structures of feeling* discussed above. Importantly, these affective states (to use the language of Clough and Willse) gain traction within contemporary rationalities and enabling technologies. The result, as Clough and Willse note, is a circulation of “fear along with statistical profiles of populations, providing neoliberalism with a rhetoric of motive” (p. 51). Disentangling these processes, technologies, and practices is difficult work indeed, though no less important given their ongoing formation within contemporary society—in Ben’s words, our collective “society of the statistic.”

The sociopolitical formation of felt anxieties and fears draws from discourses such as globalization that make select realities and fears possible (even thinkable) and thus governable. As Ben Kisby (2014) writes, globalization refers to a simultaneous interconnectedness and interdependence of individuals and larger social forces with uncertain and unpredictable outcomes. As a consequence, the incessant production of normalizing rationalities might be understood as attempts to make meaning of uncertainty, to give a sense of order of the unpredictable. It is, I suppose, an attempt to make sense of the ways in which my individuality merges with larger discourses—how I am read and whose reading matters. These readings are inherently contradictory; the production of individuation is never smooth or without felt consequences (hence my anxiety at being understood against select social norms).

Importantly, as Kisby (2014) goes on to note, discourses of globalization are accepted by policymakers as a reality, requiring a host of policies, practices, and subjectivities to respond to the anxiety of globalization. These responses, in turn, serve to extend or accelerate globalization—the response upholds the perceived cause. In relation to Ben’s interrogation of our Information Age, statistics make possible probabilities, which in turn drive “ethical” decision-making. Policymakers conclude (and defend such conclusions) that some decisions are more ethical than others because the probability of some good outweighs the statistical probability of some other happening as occurring. Statistical assertion now takes on axiological dimensions.

Somewhat overshadowed in Ben’s critique of the “society of the statistic” are the implications of his analysis specific to the field of education. Importantly, an extension of the rationality that governs (and makes governable) our lives is the production of the expert, and this specific element would seem to have rather vast implications for educational theory and practice.⁴ As an extension of the “data-basing of our lives,” the expert becomes the manager of information/knowledge, interfacing with the data-

base, inputting information and rendering data meaningful given contemporary values and practices. The manager thus (re)produces the database and the rationality that makes the database visible and valuable. This is the expert-as-technocrat. Up and down the line, one can thus recognize the production of the expert within any number of educational institutions. Within the state of Massachusetts, for example, students are given an identification number upon entrance into the public educational system. Throughout his/her progression from primary to secondary school and all the way through the graduation exam, students generate multiple points of data assigned to their identification numbers—constellations of statistical meaning ready for ordering and examination.

Were one to follow the rationale displayed in the *Here and Now* interview referenced earlier, one might ask who “owns” that data—is it the property of the state, the student, or even the schools these students attend? Whose right is it to claim this data and process it into different formations of information/knowledge? Who gets to say what this information means? There are multiple answers, of course, to each of these questions. There are administrators and teachers, for example, whose professional success is largely defined by how such data might display (or not) student achievement. There are politicians who create educational policies and fund programs based on “what works,” statistically speaking. There are parents who are given informational outputs that situate their child against local and national norms. All of these people, and more, can lay claim to such information as it in/directly impacts their lives—defining them (as “effective” or “failing” educators, for example) and offering evidence for such definitions.

All of these identities, practices, and interpretations are thus made possible by the very rationalities that govern the production of the database. Education is now rife with dedicated experts, whose expertise is hinged upon the ability to interact with the database in ways that make (normative) sense—to take on and operate within the governing story, driven by statistical representations of who we are and what we do. These experts are here productive in the sense that they further normative rationalities—through their expertise, they accelerate the governing logic structures that mark them as uniquely qualified to produce and interpret statistical representations of education. And yet, as alluded to above, and detailed throughout Ben’s argument, to ask, “who owns” this data is to ask the wrong question. Instead, one might begin, as Ben does, with an interrogation of what makes this easy slippage among productions of data, information, knowledge, and subjectivities possible? What rationalities encourage the notion of the database as just “making sense”?

More than asking additional questions, there lies, I think, within this book subtle reminders of how one might differently respond to such discourses—critical engagements that do more than simply reproduce or reify existing discourses and the rationalities that make them possible. As a means to productively engage with *structures of feeling*, Raymond Williams writes,

We need, on the one hand, to acknowledge (and welcome) the specificity of these elements—specific feelings, specific rhythms—and yet to find ways of recognizing their specific kinds of sociality, thus preventing that extraction from social experience which is conceivable only when social experience itself has been categorically (and at root historically) reduced. (Williams, p. 133)

Here, Williams asks the criticalist to simultaneously interrogate the particular and social elements inherent in contemporary *structures of feeling*, to refuse the isolating claims of extracted individualism and, at the same time, challenge the full appropriation of individuals into the normalizing specter of population. This is, at its base, to refuse the seduction of reductionist rationalities; rationalities that, to continue thinking about education, reduce teachers and students and, then, the entire populace to a set of relations to statistical norms; the database offers the educational norms against which we all are squared, made visible, and known.

It is perhaps for this reason that Ben writes that we need to refuse “to succumb to the unreflective storytelling of statistics.” We can no longer allow the rationalities that inform statistics to define ourselves or the ways in which we make meaning in our world. Indeed, Ben asks that we move even further than refusing the logics of governing—he calls for an active resistance, one in which we perhaps, *miscalculate* ourselves.⁵ It would seem that education provides a useful arena for such miscalculation.

Notes

1. I borrow this notion of onto-epistemology from the work of Karen Barad, particularly her book, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. In this text, Barad asserts the necessary collapse of ontological and epistemological assumptions of the world as a means to bring the implications of quantum physics to bear on how we interpret and experience the world. Barad’s work has been influential on the development of what critics now term the new materialism of social theory.
2. See, for example, on neoliberalism: Harvey (2007); on globalization and citizenship, Kuntz and Petrovic (2014); on postmodernity, Peters (1997).
3. I am reminded here of the following quote attributed to Georges Canguilhem (Foucault’s advisor): “The work of philosophy is to cause problems, not solve them.”

4. In some ways, the following discussion on contemporary manifestations of the educational expert overlaps with Michael Apple's (2000) conception of *new managerialism*, a contributing element to his notion of *conservative modernization*. For Apple, the new manager provides the technical assistance to enact and manage policies of conservative modernization. For an analysis of *new managerialism* within higher education see Kuntz, Gildersleeve, and Pasque (2011).
5. Though not directly stated as such in the chapters that follow, Ben recently articulated this notion of "miscalculation" as active resistance over a beer at the Southeast Philosophy of Education Society annual meeting in Decatur, GA.

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Preface

I started this book by wanting to focus on the database as a technology of the informational society. In writing about this, I noticed myself taking for granted the notion of the “informational society,” and I came to see this concept in discursive terms. I then realized that perhaps I should take a step back from the whole thing and ask myself what it was that concerned me so much as to spark my original decision to write the book. This self-reflection forced me to recognize that I could not make a book out of a discussion of only the database. But after many wasted pages, I was not clearly grasping what I wanted so say. Given how late I was being already in sending a completed manuscript to my editor, John Petrovic, I started to panic a bit. My friend Susan Talburt had alerted me a couple of years ago to a book on statistical panic by Kathleen Woodward when I was throwing about the idea of writing about the database. Given how late I was being with the manuscript, and thinking about getting Woodward’s book, I started to think about “panic” and how effective that feeling is in shaping conduct. And once I thought about conduct, I decided that what I really wanted to say about the database is not necessarily that it is a technology of the informational society, or whatever sociohistorical phenomena that metaphor might reference, but of governing more generally.

I had written quite a bit about governmentality in education already, and so I decided to stay on the topic and reframe the book as one concerned with government more generally. By my use of the term “government,” I want the reader to understand a Foucauldian analytics that focuses

on the ways in which individual behavior is conducted in particular directions and for particular objectives. This form of inquiry rejects metaphysical ideas about reason, rationality, freedom, the State, the individual, and so on, and assumes that what we can understand by these terms when they are deployed depends greatly on sociohistorical attempts at rendering reality in a particular way, and with the particular objective of getting us to behave in the ways dictated by such rendering.

In this book, I examine a series of governmental “technologies” that I believe strongly characterize our present. Each chapter is written in terms of an overall book—I hope—but also, I hope as well, can be read independently of each other. Each of the technologies I examine works in the overall processes of government but also have a logic that I think is inherent to it. The technologies that will be of concern to me in this book are information, statistics, databases, economy, and accountability. I offer arguments about the role these technologies play in contemporary politics. Contrary to most social and political analyses of these terms, however, I do not take the notions of information, statistics, the database, the economy, or accountability as given, as reflecting empirical realities independent of the ways they are put into discourse and made intelligible and practicable. I will treat these concepts in terms of (the sometimes oppositional) rationalities for rendering reality thinkable, and consequently, governable.

As is true of much of my other scholarly interests, the discourses that I was most attracted to with regard to the governmental technologies I listed above were the critical analyses of them. But I found those discourses lacking; they seemed way too committed to rationalist and foundational ideas about freedom and domination and to criticisms that I thought were, well, superficial. More precisely, such criticisms missed the ways in which notions of information, for example, work in the governance of individuals in a world in which the State is ostensibly no longer a primary basis for subjectification and for politics—an argument about the State, by the way, that I ultimately reject as too narrowly focused on capitalist exchanges at the expense of governmentality. Governmentality entails always looking to the attempts at shaping conduct and has us see various political agencies and actions as more or less salient in the processes of governing.

What I want to have us conclude in my discussion of the governmental technologies I referred to above is that in modern forms of government in liberal societies, our lives are subjected to neoliberal rationalities, rendering our lives thinkable and governable through an array of devices for the management of risk, using the model of the economy, and heavily investing in the uses of information, statistics, databases, and oversight mechanisms associated with accountability. These technologies bear on the field

of education, as I indicate more or less explicitly throughout this book, but exceed it, and the excess is what interests me most. So I will not be focusing all my arguments in the realm of education per se, hoping not only that this book has usefulness to people outside of field of education as much as those within it, but also that the reader concerned with education (or any other field of inquiry or practice) will come to his or her own conclusions about how my arguments might shed light on his or her field of concern. Furthermore, my primary task here is analytical, and so I try to refrain from offering solutions. I prefer to leave readers with more questions than they might have had prior to reading the book, so that they can reimagine their own present and future and thus their own forms of self-government.

Finally, I want to thank foremost my partner, Eric Dwyer, who has had to bear a litany of polemics from me about, well, everything under the sun. His patience (and sometimes “dolphin-like” comments—inside joke) have helped me sort through this stuff. I want also to thank people who have offered me avenues for discussion—friends like Susan Talburt and Glenda Musoba, some colleagues at Florida International University (FIU), but also other colleagues (e.g., at Georgia State University, at conferences, etc.) who, unfortunately, constitute too many to mention specifically. I thank my university, FIU, for allowing me a one-year sabbatical to work on this. I thank also John Petrovic who, after a discussion of the book concept, had enough faith in me to offer me a contract to develop it. I also thank him for his patience in waiting for me to complete this book. I must thank my children, Daniel Ryan and Maria Rose, who, while they did not offer me much help in terms of the substance of this book, did constantly embarrass me about my lack of progress, and who also insisted that I mention them in this book; and I have learned since their birth, as have they, that I am mush when it comes to refusing what they want.

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1

Govern-Mentalities

Inquiry

In this book, I examine a series of governmental “technologies” that characterize our present. I offer arguments about the role these technologies play in contemporary politics. The technologies that will be of concern to me in this book are information, statistics, the database, the economy, and accountability. The economic/social/political structure arising from—or giving rise to—these technologies has been imputed to, or implicated in, what many scholars (perhaps too loosely) call the “informational society,” which is characterized by the production, uses, and commodification of information. I will discuss in much more detail what is entailed in calling forth the notion of an informational society” in Chapter 2, but for now I want to assume its existence and set the context for my primary proposition that the technologies I labeled above play a key role in a politics defined by information. The notion of information thus warrants center stage in this book.

Saying that information (or statistics, the database, the economy, accountability) plays a key role in contemporary politics is not really saying anything particularly interesting. Of course, information plays a key role in contemporary politics, as do many other things—people, technologies,

identities, interests, ideologies, mass media, money, the Koch brothers (in the United States), xenophobia in most countries, and so on. But I will argue that the important role information plays in politics is not what is commonly assumed, that is, as a kind of knowledge (or avenue for knowledge) that will influence policymaking. Such typical understanding of the role of anything in politics (as well as the typical understanding of politics itself) is superficial, one that leads to (also superficial) criticism about information that is overly concerned with questions of reliability, privacy, surveillance, among others, but that misses the ways in which notions of information work in the governance of individuals in a world in which the State is ostensibly no longer a primary basis for subjectification and for politics. This kind of inquiry into contemporary politics is, I think, atypical in the social sciences, and certainly in the field of education, which is the field that gives me a location within the academy and which plays a more or less significant role in this book. So I think some greater explanation about my mode of inquiry is in order.

Contrary to most social and political analyses, I do not take the notions of information, statistics, the database, the economy, accountability—indeed, any social, political, juridical, or economic concept—as given, as reflecting realities independent of the ways in which they are put into discourse and made intelligible and practicable. That is, my premise is that such concepts reflect less the elaborations of particular realities than various rationalities for rendering reality thinkable, and consequently, governable (Rose, 1996, p. 42). I take my cue from literary theory and cultural studies, which take an interdisciplinary approach that treats academic and popular texts as just that: texts that can be read and (re)interpreted. The term “text” here refers not only to written artifacts but to all things that require interpretation: a document, a body, an event—anything that signifies meanings. My reading of texts is not particularly concerned with their intended meanings; in addition to the fact that such a concern is too rigidly committed to an elusive practice to begin with—determining an author’s intent—I am not as much interested in what a text intends to mean than in how it works in rendering as real, and amenable to some kind of intervention, a given social context, phenomena, body, or whatever.

For me, the point of interpreting texts is to uncover how people, events, and things are *invented* so as to justify their governance. Texts, therefore, are crucial parts of the strategies of politics. I am not simply saying, I hope, that texts will have political effects—that much is given—but that texts are themselves political, especially when they, paradoxically, depoliticize issues. Via texts, we narrate our existence, and our existence as social beings is highly linguistic and symbolic. Analyzing texts requires understanding how

crucial texts are to the ways the world can be seen, to the ways the world can reach us, and to the ways we will manage our lives and allow others to do so for us. So my task in this book is to offer arguments about how texts work in the world. The most important texts in Western cultures are those that come from the political, legal, and economic spheres, because of the legitimacy we accord to these spheres as authorities on our lives, and so their texts greatly shape what can happen to us. And it is for this reason that I privilege them in this book.

Again, this inquiry entails a multidisciplinary approach to the study of society and is also unabashedly political. It is important to have many interpretive frameworks in analyzing texts because they are tricky; they are more or less explicit about where they come from, what motivates their creation and deployments, and which rationalities they further and of which they are (more or less explicitly) representative. In other words, such a mode of inquiry entails *reading against a text* and asking how and to what extent a text addresses its own political presuppositions and contexts. Being unabashedly political is important, for it makes clear that interpretation is a political act. Such an approach rejects what is known as scholarly objectivity and positivist conclusions in favor of a subjective and polemical analysis that affirms that interpretation is always personal and provisional and that its purpose should always be to open up dialogue for imagining different forms of governing ourselves. To make one's political agenda explicit forces one to be concerned with the political agenda of all texts, including one's own, and to see that all texts, intentionally or not, have a more or less effective role to play in the governance of the world.

I have been saying, without explaining it, that texts play a key role in governing, but that contemporary politics makes the State less important in such governing. In saying this, I am setting up an opposition between "the State" and "government," one which I will tease out more elaborately in the next section of this chapter and more or less in the other chapters that follow. For now, I want to highlight what kind of inquiry allows a concern with government but not necessarily with the State. My analyses in this book is of governmentality, which is a Foucauldian concept that stands for an analytics that focuses on the attempts in advanced liberal societies to shape and direct people's behaviors in order to accomplish particular objectives. This form of inquiry rejects metaphysical ideas about reason, rationality, freedom, the State, the individual, and other liberal notions. It assumes that what is considered, say, "rational" in a given social context depends on which assumptions about goals and means can claim plausibility, which criteria for those things are invoked, and which authorities get

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to define statements as true and practices as rational (Bröckling, Krasman, & Lemke, 2011, p. 9).

My analysis tries to account for as many of the four dimensions of governmental analytics identified by Mitchell Dean. First, I attend to the forms of visibility that particular notions like information, statistics, the database, the economy, and accountability illuminate and what they obscure. Second, I attend to the technical aspects of the texts, that is, the means, mechanisms, procedures, instruments, tactics, techniques, technologies, and vocabularies they use (and justify be used) in governing individuals. Third, I attend particularly to the forms of knowledge and expertise (i.e., legitimizing discourses) that arise from and inform the texts' rationales for governing, as well as to how these legitimizing discourses assume and give rise to specific forms of truth. Finally, I attend to the inventions of individual and collective identifications (i.e., identities, capacities, interests, attitudes, etc.) through which governing operates and which specific rationalities try to (re)form (Dean, 1999, pp. 30–32). I will be successful for the reader of this book if I can enhance the “thinkability” of the power relations that govern our present (see generally, Barry, Osborne, & Rose, 1996, p. 2).

I am concerned in this book with modern liberal governmentality, but I will try to avoid traditional liberal dichotomies, such as individual/state, public/private, economy/society, freedom/domination, and others. Instead, I will treat the use of such dichotomies as attempts to render reality thinkable in ways that justify its governance. I do focus on what we generally see as “political,” but not in terms of political science. I try to attend to the ways in which the notion of the political is produced in the first place (see Bröckling et al., 2011, p. 12). This kind of analysis, I must say now, does not oppose all forms of governing and in fact assumes that one *cannot* oppose all forms of governing, since to govern means to try to shape conduct, including one's own. The point of my analysis, following Dean, is to try to make explicit how contemporary governing works so as to open up spaces in which we might think of the possibility of governing differently, to highlight when resistance and contestation brings urgency to transforming governmental practices, and even to show the degree to which such transformation may prove difficult (Dean, 1999, p. 35).

I will spend a great deal of space in this book on the notion of the individual and its derivatives, such as autonomy, freedom, rational action, and so on. But I treat these notions as technologies of government, which are also used in self-government. Corporeal and historical individuals use certain discursive notions of individuality as a way of governing themselves, and what I will discuss in the book is how in liberal societies those attempts at self-governance get linked up with larger political agendas. This mode

of inquiry, then, sees the individual as an effect of governmental power. Traditional social analysis is characterized by a fear that the subject—even consciousness itself—might not be entirely autonomous and self-generating, resulting in a kind of criticism based only upon the construction of identity, and which can inadvertently advocate various strategies by which what is considered other is to be tamed or reined in for the good of the order (see Docherty, 1996, p. 6). Criticism should instead be concerned with the ways certain bodies, gestures, discourses, and desires come to be identified and constituted as individuals and for what purpose. Following Michel Foucault, the “individual” is an effect of power, and at the same time (or because of this effect), it is also an element of the way power is articulated (Foucault, 1980, p. 98).

Freedom, in particular, is a concept that works for both right-wing and left-wing agendas, and in this way, it is an abstraction that blinds us to ways it is put into effect in practice. The so-called freedoms in liberal societies are fitted to a political order in which citizenship—and indeed, personhood—for some entails the opposite for others, and so accepting ahistorical abstractions about freedom forecloses the possibility of perceiving it in terms of the denials and suppressions instantiated by and through it (see Brown, 1995, p. 6). As Wendy Brown (1995) argues with regard to contemporary identity politics, we may find comfort and see freedom in the social categories of identification that mirror reversals of suffering and domination, but then we might actually fail to address the subjectification that domination effects through the constitution of those very social categories. The recourse to freedom in leftist politics, therefore, may yield a paradox in which our imaginations about freedom are always constrained by, and perhaps even require, the very structures of oppression that such imaginations seek to oppose (p. 6).

All of this is to say that the most important thing we can do in and for social criticism, following Foucault, is not to discover what we are, but to refuse what we are. The critical problem of our day may not be to seek to liberate the individual from the state, from corporations, or from some other oligarchies—or to free the state from these others forces—but to liberate both from the kinds of individualizations (or social categorizations) that have been imposed on us all for centuries (Foucault, 1982, p. 216). So with this elaboration of my mode of inquiry out of the way, let me now get to government in liberal societies.

Governing

My intent in this book is to sidestep conventional assumptions about power, the individual, domination, and so on, as well as the critiques they inevi-

tably lead to, and to argue that information, statistics, the database, the economy, and accountability are central technologies for the governing of individuals, whose subjectivities, and thus their forms of self-governing, are tied to such technologies in an era in which, ostensibly, the nation–state plays less and less of an important role in the processes of subjectification. I am not sure that the nation–state is at all less central to the processes of subjectification, and thus of government, as I explain throughout this book, but even assuming such a logic for now, I will argue that its role is different from what we are used to understanding when we privilege notions of sovereignty in analyses of power.

Again, I am arguing for what appears to be a contradiction between notions of government and those of the nation–state. In other words, how is it possible to assume (at least temporarily) that the nation–state plays a diminishing role in subjectification but also that information, statistics, the database, the economy, and accountability play key roles in government? Is it not the case that the terms “government” and “nation–state” are about the same things? I will argue that they are not about the same things, though they are related and perhaps even mutually supportive—a relation, however, that is the effect of the modernization of the State and not something inherent to it. Thus, my use of the term “government” warrants some elaboration.

In using the idea of “government,” I follow Foucault in analyzing contemporary forms of governing individuals within a concept he coined, “governmentality.” By this, he meant something other than the institutions, practices, or laws of the State or any of its subdivisions. With typically ambiguous, evocative, and ironic neologisms, Foucault used the term “governmentality” to refer to the “conduct of conduct,” or the ways in which myriad institutions and actors, including state ones, seek to direct the conduct of individuals (Gordon, 1991, pp. 2–3). As Mitchell Dean suggests, the idea of the “conduct of conduct” is wonderfully ambiguous, but full of meaning because of it. As a verb, the term “conduct” means to lead, to direct, or guide. As a noun, “conduct” refers to behaviors and actions. The “conduct of conduct” therefore implies a kind of rationality or calculation of how the “conducting” of behavior is to be done (Dean, 1999, p. 10). In a sense, then, government entails a “mentality,” an orientation, an attempt to direct the behavior of an individual, a family, a society, an institution, a self, or any other social entity, by using particular kinds of logic.

Government includes the ways others seek to direct one’s behavior, but also the ways one governs oneself.¹ Via the use of all kinds of rationalities and technical practices, government addresses itself to people’s behavior by making particular things thinkable and practicable both to the governed but also to the would-be governors (Gordon, 1991, p. 3). So I will not as-

sume in this book a notion of *the* government, especially as a euphemism for state action, but *a* notion of government that only partially—though importantly—takes place through the mechanisms of the State. Indeed as Gilles Deleuze (1986) pointed out, “government” comes before the state (p. 76). I will define “government,” and use the term throughout this book, then, as the ways in which the conduct of individuals and institutions is problematized and made the end of techniques seeking to direct that conduct in particular directions and for particular purposes.²

Not all rationalities by the State and other authorities can be called governmental, and not all practices premised on such rationalities are effective; rationalities become governmental when they become technical. That is, a rationality becomes governmental when there are in it justifications for interventions into people lives, when they are attempts to shape behavior via policies, practices, “how-to’s,” and so on. And, the relationship between governmental strategies and resistance to them is contradictory, in that resistance marks both boundaries and limits of governmental action, but also entails a spark to government, a reason for more intervention. Government is always a precarious affair, realizing itself as crisis prevention and management, performing constant reinterpretations and recuperations, and producing numerous unintended and contradictory effects—thus, it often fails to accomplish its goals (Bröckling et al., 2011, p. 19). The point here, again, is that a rationality becomes governmental when it becomes technical, when it seeks to realize itself via assembling forms of knowledge and a variety of devises and technologies oriented to produce practical outcomes, and whether or not it produces its intended outcomes is irrelevant to its logic of attempting to direct conduct (Rose, 1999, pp. 51–52).

Following Nikolas Rose (1999), we can view informational technologies via governmentality as more than, for example, computers, electrical wires, and so on, but also as inculcating a form of life, reshaping various roles for individuals, requiring certain corporeal techniques necessary for using electronic devices, inventing new inscriptions and communicational methods, ensuring adherence to certain devices for getting work done, and so forth (p. 52). Of course, there are numerous forms of resistance to informational technologies (e.g., parodies of them, Luddite-like arguments against them, refusal by some to use them, etc.) and numerous gaps in their reach (e.g., they often only reach those able to buy them, they are used mainly by youths and less so by adults, etc.). The key starting point for an analysis of government, however, is the identification and study of moments and situations in which governing comes to be called into question, when a problem is invented as needing intervention, and when agents of all sorts

pose the question of how to govern some persons, places, or things (Dean, 1999, p. 27).

Again, I will be concerned with liberal governmental rationalities and practices in this book. Modern liberal governmental rationalities are committed to respecting private zones of conduct while also seeking to shape the conduct in these zones with such a respect in mind. Thus, these rationalities are much less likely than others to justify direct state intervention in these private zones and much more likely to utilize independent authorities or experts (e.g., philanthropists, doctors, educators, hygienists, managers, planners, parents, social workers, etc.), entailing a kind of “governing at a distance,” as Rose puts it. Liberal governing, according to Rose, depends on the State’s authorization of such authorities, on aligning the political aims of the State with the strategies of experts, and on linking the calculations of authorities with the aspirations of free citizens (Rose, 1999, pp. 48–49). Still, rhetorically, liberal texts appear obsessed with the State, and so it might be instructive now to view the role of the State via a framework of government, for again, in liberal rationalities, government does not take, and never has taken, place entirely through the actions of the State.

Statism

In an early iteration of his notion of governmentality, Foucault meant by it three things. First, governmentality entails an ensemble of institutions, procedures, analyses, reflections, calculations, and tactics that allow the exercise of a very specific and complex form of power that has the population as its target, political economy as its major form of knowledge, and the apparatuses of security as its technical instrument. Second, it entails an understanding that for a long time in Western nations, there has been a tendency toward the saliency of government over all other types of power, leading to specific governmental apparatuses and knowledges. Finally, governmentality is the process by which the state gradually became “governmentalized” (Foucault, 2004, pp. 108–109). So, while the State plays a key role in governmentality, he imagined a time in which we had a State but no government. I am not sure what this means, but the key point here is that in our analysis of liberal governmental rationalities, we must uncover the ways government takes place through (and perhaps against) the State and not assume that all governing is done by the State.

More specifically, the modern (Western) state for Foucault was the result of a complex linkage between political and pastoral power, where political power is understood as juridical, that is, organized around laws, rights, legal distinctions, and so on, and pastoral power (arising out of Christianity

and its notion of salvation) is understood in terms of the care and guidance of individuals. For Foucault, pastoral techniques eventually produced forms of subjectification from which the modern state and capitalist society could develop (e.g., the idea of the “free citizen,” the notion of *homo economicus*, etc.), and the earlier goal of salvation was secularized and rearticulated as a political problem of the State (Bröckling et al., 2011, p. 3). In the 1980s (perhaps earlier), however, we saw in many Western nations, particularly in the United States and in England, a critique and undermining of state welfare regulations and a movement toward neoliberal governmental rationalities and practices. Yet the introduction of neoliberal governmental practices is not a diminishing of the State as much as a reconfiguring of governmental projects, an argument I will elaborate upon in Chapter 5.

This idea of a governmental reconfiguration in neoliberalism becomes particularly important as we sort through contemporary discourses on the nation–state, especially those relating to globalization, information society, postindustrial society, and others that indicate that the modern nation–state is, if not undermined, at least radically transformed from what it was before. I prefer to dispense with empirical assumptions about the State and instead recouch this discourse as one in which, at the very least, our models or frameworks of the State have changed. Of course, when one’s frameworks change, so does the materiality one is able to see. I will spend more time on these nation–state discourses throughout this book, but for now I want set up how one might recast these discourses in terms of governmentality.

Rose indicates that today we can no longer count on the conventional ways of analyzing political power, which often took as their model the idea of the state formed in 19th century philosophical discourse. This discourse assumed a centralized body within a nation, with a monopoly on the legitimate use of force in its territories, and all other forms of legitimate authority had to come from such power. In this discourse, the individual was assumed to have free will and was a political subject of right. Collectives were assumed to be singularities with identities, which provided the basis for political interests and actions (e.g., classes, races, interest groups, etc.). Freedom was defined in negative terms as an absence of coercion (Rose, 1999, p. 1).

The contemporary arguments about globalization, information society, and other similar utopian or dystopian discourses assuming the end of the nation–state call into question the presuppositions of the 19th century understandings of political power (see, for example, Bell, 1976; Castells, 1996; Fukuyama, 1992; Hardt & Negri, 2000; Sakaiya, 1992). This scholarly work on globalization, for example, has focused on shifts in economic, social, and political relations that make the nation–state less central in those relations, and it is assumed, I think correctly, that all this is made possible by

informational technologies that have led to flexible production capacities, flexible political identities, porous borders, and an accompanying general fragmentation or fluidness of modernity's foundational concepts: the nation-state, its national society, and its economy (see Perry & Maurer, 2003, p. ix). (I believe that informational technologies actually make this discourse even possible, since many of the claims made about socioeconomic changes are based on information in databases.) But while some reify this in uncritical elaborations of the changing nature of capital, and others criticize the inequality and social upheaval this brings, "globalization" essentially is, as Richard Warren Perry and Bill Maurer (2003) argue, a discursive topos, a space of debate about alternative visions of the future. Following this logic, then, "globalization" (or "information society") is as much about material developments as an "ensemble of intersecting arguments about the history of the present, and about the nature of the particular future that the quite specific present portends" (pp. ix-x). We will treat such concepts like globalization and informational society, therefore, as rationalities for rendering some reality thinkable and thus governable.

I must stress that framing what are undeniably material developments (regardless of what we attribute to them) in terms of governmentality is not to reject empiricism or deny the societal effects of actual policies or practices; it is to have to us think about how we construct particular realities and how we justify particular conduct because of such construction. The notion of globalization, in particular, highlights spatial-temporal changes, but by itself—that is, without seeing how the notion is made technical—it can tell us little about how individuals are going to be managed, and how they will manage themselves, via and perhaps outside the nation-state. If the notion of sovereignty formed in 19th century political arguments no longer has significant meaning, according to the logic of the globalization discourse, what other notion is put forth instead, and again, how will such notions render reality thinkable so as to allow it be subject to social administration? Let me offer an example of how we might proceed with this logic of governmentality with regard to that which we call illegal immigration, which has become an important global concern and implicates the nation-state in a direct fashion.

The current administration of illegal immigration in the United States offers a case in point of how particular notions of government can reconfigure spatial logics in order to administer the undocumented—those who enter the United States without authorization or who stay after their authorization expires. Most discourses on globalization emphasize the free flow of individuals across national borders. Yet, according to Susan Bibler Coutin, undocumented persons in the United States experience a space of nonexis-

tence with particular characteristics, temporalities, and dimensions. While such persons lack juridical existence and are not afforded legal protections, they are physically present in the United States, often living with relatives or friends in cramped residences and often working in a factory, a home, or in some other place (I would add that their children often are present in schools and require some residential information in order to enroll). So, while there exists no juridical existence (or legal presence), there is indeed a physical existence and so, arguably, there must be “records” of such existence. But because they do not appear in the records that define legal existence in the United States, such as rental agreements, utility bills, social security cards, driver’s licenses, and so forth, they are not officially “here.” If they attempt to prove continual presence in the country as a prerequisite to qualifying for any kind of amnesty program, they are likely to find that such unregistered presences are deemed absences. Thus, according to Coutin, the physical presence of the undocumented is unofficial and as such does not count and cannot be demonstrated (Coutin, 2003, pp. 174–175). One can also say as well that such physical, but unregistered, presence does, ironically, constitute the kind of data or evidence necessary to justify deportation and the stripping of the physical presence of actual individuals. Thus, the use of official notions of absence, presence, and space depends on what governmental objectives one seeks to accomplish.³

Much of this reconfiguration of space with regard to illegal immigrants is authoritarian, but not all such reconfigurations should be thought of in that way. For example, consider the rise of “humanitarian borders.” They emerge when there grows an understanding that border crossings entail life and death decisions for immigrants and migrants (see Walters, 2011, p. 138). Thus, as William Walters argues, humanitarian forms of government entail administering various collectivities in the name of the preservation of life and the alleviation of suffering as the highest of values. There arises from this a set of very complex interactions between humanitarian reason, specific forms of authority (i.e., medical, legal, spiritual), and public and private apparatuses for raising funds, training volunteers, administering aid and shelter, documenting injustice, and publicizing abuses (Walters, 2011, p. 143). These forms of government often accomplish their goals of diminishing suffering and injustice, but the overall point here is that governmentality requires us to see that spaces and divisions are invented categories in order to accomplish certain objectives and do not exist *a priori*.

But, while spaces and divisions are invented, and because of this are historically arbitrary (to the extent they could have been otherwise), they are never imaginary; they not only render reality thinkable but in many ways create that reality, and in all cases, the point of such inventions is to

make that reality administrable and amenable to particular governmental objectives. And so we want to be concerned with such categorizations, in this case, statist ones, because of their very real material effects, a point I want to keep stressing throughout this book. The State is a particularly important concern for modern liberal governmentality, and so categories are constantly invented for it. For now, though, I want to stay on the schemata of modern forms of government by highlighting three other aspects that are central to them: the notion of bio-politics, the notion of the exception, and the notion of freedom. I address each of these aspects in turn.

Bio-Politics

In the 17th and 18th centuries, while political philosophers were concerned with theories of sovereignty, natural law, and social contracts, a form of power began to emerge as a coherent political technology for fostering the life, growth, and care of the population. Foucault referred to this as “bio-power” or “bio-politics” (Foucault, 2004, p. 1). Prevailing theories of sovereignty failed to account for, and perhaps even obscured, the radical shifts in cultural practices that were taking place since the 17th century. In particular, there was the emergence of the social sciences dealing with the empirical investigation of social life, and these sciences were crucial to the imperatives of the social administration of both individuals and the population (Dreyfus & Rabinow, 1982, p. 134).

Bio-politics brought life and all its dynamics into the realm of explicit calculations, and it coalesced into two modes of power. The first entailed the need to understand and make use of the population, and for this, the social sciences generated scientific categories—species, populations, races, and so on—which began to gain more significance than juridical ones. The second entailed the need to create docile bodies for capitalist and bureaucratic purposes, and for this, the body was the focus of attention and for which the social sciences generated techniques for its manipulation and control. For clarity, we will call the first mode of power “bio-politics” and the second “discipline.” The individual was key to both imperatives, but for the first, it was to ensure the government of society as a whole, and was not of interest as such, but for the second, it was of primary interest for its own sake, in order to ensure its normalization (see generally, Foucault, 1978, pp. 136–145).

Much has been said about disciplinary power by many others, and so here I will just compare it to bio-politics (the important work on disciplinary power is Foucault, 1977). Bio-politics for Foucault is the concern of modern forms of governmentality, which is characterized by an apparatus

of security, which (a) recasts phenomena in terms of probable events, (b) determines reactions to it by calculating their costs, and (c) generates averages considered as either optimal or not to be exceeded (Foucault, 2004, p. 6). In distinguishing among the major forms of power, one can say that while sovereignty is exercised on territories, discipline on bodies, security (i.e., the modern form of government) is exercised on populations. Sovereignty entails generating laws and requires obedience to those laws, while security entails governmental forms of power and justifies correct ways of governing (Foucault, 2004, p. 98–99). Discipline only prohibits, but security does not just prohibit; it makes use of various instruments (sometimes prohibition) to respond to reality in such a way as to cancel it out, nullify it, limit it, check it, regulate it, or even let it happen “naturally” (Foucault, 2004, p. 47). The point of government characterized by bio-politics is not just to control the population but to improve its conditions, that is, increase its wealth, longevity, and health through various campaigns (Foucault, 2004, p. 105).

In either the case of discipline or of government, power is not to be understood in terms of violence or ideology (both of which tend to be concepts relating to sovereignty), although both violence and ideology may be techniques used by all forms of power. Power, for Foucault, entails an entire series of rationalities, techniques, and practices that are brought to bear upon possible actions; such forms of power incite, induce, seduce, and in some cases make actions easier and in other cases more difficult (Foucault, 1982, pp. 220–221). And it is important to understand how struggles are implied in relations of power; struggles can block particular exercises of power but also entail an imperative for the creation of particular kinds of strategies and rationalities to address that resistance (Foucault, 1982, p. 224). Power in modern forms of government, however, is always a way of acting upon subjects who are deemed legitimately and empirically capable of acting otherwise. To understand power in terms of government, according to Foucault, one must attend to (a) the creation of differentiations, which allow governors to act upon the actions of the governed (e.g., the normal, the pathological, etc.); (b) the types of objectives pursued by those seeking to govern (e.g., to create self-responsible citizens); (c) the means of bringing power relations into being (e.g., threat, discourse, economics, etc.); (d) the kinds of institutions used (e.g., legal structures, family, etc.); and (e) the kinds of rationalities bringing power relations into play (e.g., scientific knowledge, familial love, etc.) (Foucault, 1982, pp. 223–224).

In terms of the creation of differentiations, the examination is the key technology in disciplinary power, which is directed at individuals, while statistics is the key technology in bio-politics, which is directed at populations.

The examination entails a kind of power, according to Foucault, that marks the individual by his own individuality, attaches him to his own identity, and imposes a law of truth on him that he must recognize and that others must recognize in him—this power invents individual subjects (Foucault, 1982, pp. 212). The logic of statistics, however, entails understanding the dynamics of the population so as to govern it efficiently. Statistics, as the term implies, arose from the need of the State to exercise power over its territories, and to do so, it needed to know its own populations, geographies, climates, demographics, and so forth in order to understand the reach of its power. This knowledge had to be concrete, specific, and measurable in order for the State to extend its power effectively. But with bio-politics, statistics also allows the discovery of regularities (e.g., epidemics cannot be reduced to the family, certain customs and activities have specific economic effects, etc.). These regularities can be quantified and then thresholds can be statistically established over which interventions are deemed appropriate. So what began as studies of the population to determine the State's power soon became a logic of using political arithmetics to govern populations (Dreyfus & Rabinow, 1982, p. 136).

As Foucault indicated, bio-power qualifies and measures things, appraises them and creates hierarchies, and effects distributions around a norm; a “normal” society is the historical outcome of a power centered on life (Foucault, 1978, p. 144). Of course, examination results, which can relate to the most minute details of an individual's life, can be aggregated to offer knowledge about various populations (and collected in a database, as I will discuss in Chapter 4) and thus become parts of bio-politics, and statistical information can be disaggregated to offer knowledge about particular individuals, thus becoming a part of discipline. Discipline and bio-politics may work in tandem and be mutually supportive, though they can also work in opposition in that the discovered needs of the individual or the population may need to trump the other. At any rate, once politics became bio-politics, not only was enhancing the life of the population a central concern, but the destruction of lives also became possible when it was deemed necessary for the welfare of the population. Questions about life and death were no longer moral but empirical.

Because decisions about life and death were now deemed justifiable by scientific evidence, bio-power became professionalized. The social sciences (e.g., psychology, demography, statistics, criminology, social hygiene, and so on) were first situated within particular institutions of discipline (e.g., hospitals, prisons, schools, public agencies) where their roles became specialized, as these institutions needed more refined and operationalized discourses and practices. So these knowledges developed their own rules of

evidence, mechanisms of recruitment, and specializations, but, as Hubert Dreyfus and Paul Rabinow argue, they did so within the larger context of disciplinary technologies, a historical development often ignored by an assumed objectivity that excludes questions of its own possibility (Dreyfus & Rabinow, 1982, pp. 160–161).

The key point here is that these social sciences do more than simply uncover the underlying dynamics of individual and collective existence. They serve the imperatives of bio-politics; they bring into being the very categories they purport to be explaining. They bring into existence, for example, individuals who are “at-risk,” “delinquent,” “unemployable,” “dependent,” and so on, and in this regard, these sciences put themselves in the service of government by offering expertise intended to reform these (newly created) individuals. Any resistance by those individuals, or even failure on the part of these experts to reform them, means only that there needs to be more expert knowledge and thus more power for these experts. This expertise essentially depoliticizes issues, taking what is essentially a political problem but removing it from politics by recasting it in the ostensibly objective language of science (Dreyfus & Rabinow, 1982, p. 196).

All this might imply that discipline and government have supplanted sovereign power, and in a way, the globalization discourse can be said to be premised on such logic. But can we seriously get rid of the notion of sovereignty as a framework for power, which Foucault did despite his protestations to the contrary? No, and the notion of the state of exception is a key framework for making such power central to modern governmental logic (in which a perpetual state of emergency makes many of us potential subjects of state-sanctioned violence), to illiberal modes of control and practices (e.g., torture, shoot-to-kill policies, racial profiling, etc.), or to any logic that ties bio-politics to decisions about who can live and who must die, who may be granted rights and who may be denied them, and so on. I now turn to the notion of the exception, which requires us to see sovereignty as central to, though not all encompassing of, government.

Exception

In extending a logic put forth by Carl Schmitt that the sovereign is “he who decides on the state of exception,” that is, he who can suspend the law, Giorgio Agamben proposes that the exception has now become the rule. The voluntary creation of what has become the permanent state of emergency has become one of the essential practices of contemporary nation-states, including so-called democratic ones.⁴ According to Agamben, the transformation of a provisional and exceptional measure into a technique of state government

threatens radically to alter—in fact, has already altered—the structure and meaning of constitutional forms of government (Agamben, 2005, pp. 2–3). In the permanent state of exception, legal statuses can be erased, producing legally unclassifiable beings, as in the case of the detainees at Guantánamo, where, according to Agamben quoting Judith Butler, “bare life reaches its maximum indeterminacy” (Agamben, 2005, p. 3).

In the United States, according to Agamben, because the sovereign power of the president is essentially grounded in the emergency linked to a state of war, over the course of the 20th century, the metaphor of war became an integral part of presidential political vocabulary whenever decisions considered to be of vital importance are being imposed (Agamben, 2005, p. 21). Indeed, at the risk of stretching this argument too far, in less physically violent ways, we can see how the logic of war in documents like *A Nation at Risk*, indicating that we are economically falling behind other nations because of our inadequate education system, justifies serious federal incursions in the otherwise legally established boundaries and sovereignty of local school boards, the family home, and individual bodies (National Commission, 1983). At any rate, the state of exception today has reached its maximum worldwide deployment, and thus the normative aspect of law can be obliterated and contradicted with impunity by a state-sanctioned violence that, while ignoring international law externally and producing a permanent state of exception internally, nevertheless still claims to be applying the law (Agamben, 2005, pp. 86–87).

Agamben superimposes notions of sovereignty (premised on a permanent state of exception) with Foucault’s notion of bio-politics, which Foucault assumed characterizes modern forms of government but which Agamben argues goes farther back than that, as the original locus of sovereign power. According to Agamben, the key distinction to make with regard to sovereignty is between bare life (i.e., physical life before, or stripped of, all legal protections) and political life (i.e., life with guaranteed legal rights). Traditional political theory deriving from the Greek notion of the *polis* excluded bare life and concerned itself only with political existence, and so sovereignty was ultimately premised on the exclusion of bare life (as well as the exception). But what characterizes modern politics is not bio-politics as Foucault understood it, but the process by which the exclusion became the rule, that is, when bare life begins to coincide with the political realm, creating a zone indistinction, one in which a decision to grant political status to some must come at the expense of denying it to others (Agamben, 1998, p. 9). Modern political government entails this constant interplay of bare and political life, and when political rights are gained by individuals in conflict with their nation–states, those rights are gained at the expense of

offering a new and more dreadful foundation for the very sovereign power from which individuals wanted liberation or limits in the first place (Agamben, 1998, p. 121).

So, when one speaks of bio-politics, one is coming across an indistinction between bare life and political life, between the exception and the rule, and between sovereign and non sovereign power (for the social scientist and other experts are very powerful authorities in bio-politics). And if there is a line in every modern state marking the point at which a decision on life becomes one of death, this line no longer appears as a stable division of two distinct zones. The state decides which lives are to be deemed political and which lives are to remain as bare life, with no political existence, and in the latter case, because there is no political existence, there are also no political limits on the sovereign ability to exterminate that life (Agamben, 1998, pp. 121–124). With bio-politics, life now becomes the sovereign decision, and its divisions mark the distinctions between worthy (or responsible, reasonable, sane, law-abiding, etc.) and worthless (or criminal, depraved, or whatever other forms of abjection are invented) lives. In the concentration camp, the distinction between bare and political life (in which only bare life exists with no political rights), as well as the integration of science and politics (in which doctors can determine who can live and die), is the most clear. Today, according to Agamben, it is the camp, not the city, that is the fundamental bio-political paradigm in the West (Agamben, 1998, p. 181).

All this is to say that given the permanent state of emergency in Western nations, and in the United States because of a boundary-less war on terror (but there are other wars: the “nation at risk” of losing economic dominance, the “war on drugs,” etc.), to guarantee freedom is to deny legal status, and even life itself, to certain populations. In bio-politics, the population can be divided into subgroups that can be administered differently, depending on how they are deemed to affect the general welfare of the whole population (Dean, 1999, p. 100). And given how these populations are invented by statistics, I will suggest that bio-power no longer entails a politics of blood, but of information. At any rate, the notion of freedom, paradoxically, offers justification for the exception. This is because there are individuals who either abuse it or are deemed unable to make use of it, making illiberal forms of government justifiable. It is to the notion of freedom in governmentality that we move to next, and with which I conclude this chapter.

Freedom

I have been indicating that techniques of government are varied and are aimed at different forms of conduct. When directed specifically at individ-

uals, modern (liberal) forms of government tend toward individualizing subjects in such a way that they come to understand their actions as based in autonomous choice and freedom. “Freedom” thus becomes a crucial technique of social administration, and so, following Rose, it is important for understanding contemporary politics that we

differentiate the exercise of power in government from simple domination. To dominate is to ignore or to attempt to crush the capacity for action of the dominated. But to govern is to recognize that capacity for action and to adjust oneself to it. To govern is to *act upon action*. (Rose, 1999, p. 4, emphasis added)

To guarantee projects of social progress or social welfare in liberal thought entails enticing subjects to conform themselves to these projects, to believe that they are acting on the basis of autonomous choice, and to see success or failure in terms of their own capabilities. The subjects must understand their actions as based in choice, and so governmental rationalities in liberal projects seek to understand what motivates and mobilizes individuals to act, to direct their techniques to these forces, and to instrumentalize these forces so as to (re)direct them in desired directions (see Rose, 1999, p. 4). So government intervention here occurs indirectly in order to structure the fields of possibility for action (Bröckling et al., 2011, p. 5).

The idea of governing through freedom may seem contradictory or paradoxical. We have been used to the logic of coercion as the opposite of freedom, or of freedom as the opposite of government, but this makes sense only when one is working with sovereign notions in the invocation of freedom. Paying attention to the ways that certain ideas about liberty, certain ways of conceptualizing and exercising freedom, in relation to ourselves and to society as a whole, are made technical is actually what allows one to see freedom as governmental and as technical (see generally, Rose, 1999, pp. 62–64). For example, as Rose argued, a free society seems to require a census to provide demographic information on individuals who compose a nation, public opinion polls to determine the will of the people, economic and financial experts to invent and then ostensibly discover free-market systems, human resource experts to ensure motivated employees, marketing to transform people into consumers, and so forth (Rose, 1999, pp. 64–65). These are fields of possibilities for action (e.g., I might freely see an opinion in a poll and act accordingly), and thus people are deemed to act freely within such fields of possibilities.

Having said this, freedom is not the only technology for governing subjects, as authoritarian and other coercive techniques are also at work in

liberal rationalities, as I just discussed in terms of the exception; but in order to justify illiberal forms of power, the individual (or group) must be deemed somehow inappropriate for autonomy and freedom (e.g., those who are not yet adults, or those deemed “criminal,” “mentally deficient,” etc.), as well as those who are deemed risky in some way (e.g., those with diseases, illegal immigrants, would-be terrorists, and on and on). In all cases, liberal government involves calculating the costs of freedom for individuals. Liberal thought generally sees getting a subject to act on his own behalf in accomplishing larger political goals as more efficient than coercion, but in some cases, his freedom is deemed to pose a danger to the general interest and must be constrained (Bröckling et al., 2011, p. 6).

To conclude this chapter, the analysis of government sees the state as one element of government, albeit an important one, given the state of exception, and whose governmental role is historically specific. Government is made up of multiple circuits of power containing myriad authorities and logics. If there are differences in the government of a nation–state and that of a smaller entity, they are ones of degree, not kind. Modern liberal forms of government entail sets of state-based and non-state-based techniques that are geared toward shaping how we understand ourselves as governed and governors. As Dean put it, among these techniques, we find new applications of the idea of contract between state agencies, private enterprises, and individuals; the introduction of market logics in the provision of state services; the attempts at minimizing risk and ensuring the safety and security of all kinds of things; the use of accounting to govern spaces and individuals in them; the creation of all kinds of empowering community development projects; and so forth (Dean, 1996, p. 223).

My forthcoming arguments about information, statistics, the database, the economy, and accountability will thus be framed within this analytics of government. It is important to end this chapter by saying that I am not making claims about the effectiveness of any particular technology. My concern is with the intelligibility of these rationalities and practices, and with how they seek to direct behavior. Some of the technologies I analyze may seem mundane (information, databases, or perhaps in a larger scheme of things, statistics and accountability). In paying attention to what may or may not seem mundane technologies, I will only say that we should attend to the ways the “humble, the mundane, the little shifts in our ways of thinking and understanding, the small and contingent struggles, tensions and negotiations . . . give rise to something new and unexpected.” (Rose, 1999, p. 11). To the extent that we can offer explanations about how such mundane (or not) technologies or practices get linked up with major political objectives, we will learn something about modern form of power—perhaps,

and hopefully, something other than what I propose in this book. In learning something about power, we might just then allow ourselves to imagine how things would work differently if we refuse to follow the directions we are told by a plethora of authorities that we must follow if we are to register as responsible citizens.

Notes

1. Given the importance of educational institutions for many political purposes, particularly in shaping conduct and creating subjectivities, as I explain in more detail throughout this book, interest in the potential of governmentality for educational theorizing is increasing. See, for example, Baker and Heyning (2004); Popkewitz and Brennan (1998).
2. We will qualify the use of the term “government” when referring to the State, mostly with the terms “political government” or “state government.” And, of course, I will keep the term “government” to refer to the actions of the State when quoting others who use it in that way.
3. Of course, spaces in which the undocumented do not appear are in the databases that are constructed from legal identification practices (e.g., work, DMVs, welfare rolls, healthcare facilities, etc.), yet much is made of their numbers in countries. The use of numbers is a key way of saying things in the new modes of government, as I explain in Chapter 3. And so from one viewpoint, much is said numerically about illegal immigrants, but from another viewpoint, because of their absence in databases, very little can be said about them in numerical terms. Thus, this is yet another kind of political use of presence/absence to render something problematic so as to govern behavior.
4. A clear example of this is that of the war on terror in the United States, with its suspension of civil liberties for its citizens and the ignoring of national and international norms and boundaries in seeking out and punishing those individuals suspected of being terrorists.

2

Info-Notions

Society

In this chapter, I discuss the governmental role that the notion of information and its derivative ideas play in contemporary societies. Let me start with a discussion of the notion of “information society.” The conventional logic of the “information society” discourse follows much of that of globalization, and in many ways, these concepts tend to be conflated. Also closely associated with the concept of information society is that of “postindustrial society,” “network society,” and “knowledge society.” What the uses of these terms share is a sense that we are experiencing a drastic and radical change in the economic/political/social structures of (primarily Western) nation–states due to technological advances in communication and informational technologies, about which I will say more in the next section. This discourse is premised on a more or less explicit economic determinism, or perhaps (also?) a technological one. Moreover, a part of this discourse of radical change is, well, a rejection of “radical change,” or more precisely, a rejection that the change is *sui generis*. The logic of the latter discourse is that although technology is different today than it might have been in the past, the material changes in society reflect simply a later or perhaps more developed stage of industrial capitalism.

Within this debate, as with those associated with globalization, there are both utopian (e.g., that of Microsoft's Bill Gates) and dystopian views (e.g., almost all of the critical approaches to globalization). But the key aspect of this debate that I want to highlight here is that between the idea that we are experiencing a radically new society and the idea that, while we are indeed experiencing change, it does not entail a new kind of society. Although I think this debate is important for the understanding it offers about the centrality of the role of technology in current social theory, I will not be adjudicating a side in the debate. For my overall purposes of analyzing governmentality, the merits of this debate are beside the point. And in fact, as I indicated with regard to globalization in the previous chapter, sides taken in the debate form the bases for different rationalities that should be analyzed, not only for their empirical value, but for how they seek to become technical in the governance of individuals.

The predominant logic of the discourse on the information society is that we are in a new era after industrialism. The preeminent theorist of this view is Daniel Bell, who termed the new era "postindustrial society." To be fair, Bell suggested that he was not predicting the future but simply speculating on how some contemporary material developments might be useful in social analyses (Bell, 1976, p. ix). But he did establish a rather linear, stage-like sequence of societal change, even if one stage in the process is not completely over before a new one emerges. First, there was a preindustrial society, with an economy that was primarily agricultural. Second, there was an industrial society, with an economy primarily based on energy and machine technology for the manufacture of goods. Finally, we are currently heading toward a postindustrial society, in which telecommunications and computers are the strategic means for the exchange of information and knowledge. If capital and labor were the major structural features of an industrial economy, information and knowledge will be those of the postindustrial one (see Bell, 1976, pp. xii–xiv). This new society is characterized by the preeminence of theoretical knowledge in social and economic development, and more precisely, the central role that scientific research and technological resources play in such development.

Furthermore, in a postindustrial society (a) there is a shift from the production of goods to the selling of human services (e.g., education, health, and social services) and professional services (e.g., computing, systems analysis, and research and development), and (b) information technologies become the basis for a new intellectual expertise in which theoretical knowledge and its new techniques (i.e., systems analysis, linear programming, and probability theory), "hitched to a computer," become decisive for industrial and military innovation and for social control (Bell, 1989,

p. 95). Because society is dependent on information and abstract knowledge, the key occupations will be professional ones, and the key professionals will be engineers, technicians, and scientists. The key activities of these professionals will be the codification and assimilation of knowledge, and the critical kind of power will be the control of the processes of producing such knowledge (Dordick & Wang, 1993, p. 11).

I will have more to say about this so-called theoretical knowledge (i.e., for the most part, probability theory) throughout this book (and especially in Chapter 3). Here I will tease out another significant elaboration on the information society, that of Manuel Castells. Castells proposes that we are experiencing a technological revolution centered on informational technologies (e.g., microelectronics, computing, telecommunications, optoelectronics, and genetic engineering) that are reshaping the material bases of society, restructuring capitalism even as capitalism makes use of such technology. These informational technologies are leading to a new communication system, increasingly speaking a universal, digital language, and integrating globally the production and distribution of the words, sounds, and images of our culture, but also customizing them to the tastes and moods of individuals. The new technological system has its own embedded logic, characterized by the capacity to translate all inputs into a common information system and to process that information at increasing speed, with increasing power, at decreasing cost, in a potentially ubiquitous retrieval and distribution network. Interactive, complex, conglomerate networks of information are growing exponentially, creating new forms and channels of communication, shaping life and being shaped by life at the same time (Castells, 1996, pp. 1–3).

While technologies have always been put to use to allow societies to market and understand themselves, what seems different today is that the source of productivity lies in the technology of knowledge generation, information processing, and symbol communication. And what is specific to it is the action upon knowledge as the main source of productivity. Information processing is focused on improving the technology of information processing in a virtuous circle of interaction between the knowledge sources of technology and the application of technology to improve knowledge generation and information processing (Castells, 1996, p. 17). Thus, this “informational society,” or “network society,” as Castells calls it, is shaped by an information technology paradigm, in which (a) information is its raw material—here technologies act on information and not the other way around, which was the case with other revolutions; (b) there is a pervasiveness of the effects of new technologies—all aspects of our lives are shaped by the new technology; (c) the system is governed by a networking logic,

which adapts itself to increasing complexity; (d) increasing flexibility allows organizations and institutions to alter radically their components; and (e) there is growing convergence of divergent (organic and inorganic) technologies into a highly integrated system (Castells, 1996, pp. 61–62; see also Castells, 2000, pp. 5–24).

Informational technologies, according to Castells, have also led to a surge of powerful expressions of collective identity in movements based on cultural singularity or people’s control over their lives and environment (e.g., feminist, environmentalist, fundamentalist, nationalists, etc.). These movements have drawn the nation–state into a crisis of political democracy and sovereignty, and informational technologies amplify these struggles while also being the stake in such struggles (Castells, 1997, p. 2).

The sequential kind of logic with regard to major societal formations is pervasive in this discourse on the information society as well as on globalization, postmodernity, and so on. Luciano Floridi, for example, identifies four major societal revolutions based on knowledge. In the first revolution, the Copernican revolution, after Nicolaus Copernicus, the heliocentric cosmology displaced the Earth and hence humanity from the center of the universe. In the second, the Darwinian revolution, after Charles Darwin, all species of life were said to evolve over time from common ancestors through natural selection, thus displacing humanity from the center of the biological kingdom. In the third revolution, the Freudian revolution, after Sigmund Freud, we discovered that our mind is also unconscious and subject to defense mechanisms of repression, and so the willful, completely self-centered subject is displaced in favor one that must engage a social world. In the fourth revolution, since the 1950s, because of computer science and Alan Turing, we are now interconnected informational organisms, sharing with biological and engineered artifacts a global environment ultimately made up of information (Floridi, 2010, pp. 8–10).

Others have also put forth related sequence-like arguments about dramatic changes in society as a result of informational technologies. Nico Stehr argues that when knowledge (especially technical and scientific) becomes constitutive, not just of an economy but of all kinds of social relations, we witness the emergence of a “knowledge society,” although a highly fragile one. In such a society, knowledge, because so it’s important, becomes highly contested, and what were once-dominant social institutions (with a monopoly on legitimate knowledge) are no longer able to impose their will on all of society. As a result, small groups and social movements gain relative influence to resist or delay the objectives of large institutions and interpose their particular agendas into public agendas (see Stehr, 2001, pp. 1–2). (We certainly do see some evidence of Stehr’s point

in the politics of the Tea Party in the United States, a phenomenon worthy of considerable study.) Similarly, Gernot Böhme indicates that a knowledge society exists when science and technology have become major variables in development, in the forces of production, and in the life chances of the population (Böhme, 1997, p. 449).

The other side of the argument about an information society rejects the idea that the political and economic structures engendered in such a society are radically different from those of the past, certainly from those of industrialism. David Lyon argues that there is no indisputable evidence that we are in a new society and that the reasons for the emergence of the concept of “information society” are that (a) information technology is now deemed worthy of analysis, (b) while postindustrialism was essentially negatively defined, “information society” promises concrete features of social formation, and (c) a major sociologist, Daniel Bell, put his weight behind the notion of “information society” (Lyon, 1986, p. 577). The thesis about a new society, Lyon argues, is premised on a technological determinism not warranted by empirical analysis, and we should instead seek to understand not just how technology shapes society but how societal institutions shape technology (Lyon, 1986, p. 585).

Relatedly, James Beniger argues that the suggestion that advanced industrial countries have become information societies has now become cliché, and that the labor force in all the economically advanced countries has worked primarily at informational tasks for a long time. What is different now is not the use of and value placed on information but the ways that information processing and technology are used to enable formalized and programmed decision-making in the processes of social control (Beniger, 1998, pp. 15–16). A similar point was made by Frank Webster and Kevin Robins, who propose that what makes the so-called information society different from an industrial one is not so much the technology but the exploitation of information and knowledge. While this allows for new mechanisms of social management, planning, and administration, it also allows for greater forms of surveillance and control (Webster & Robins, 1989, p. 327).

Still others argue that the information age is not of recent origin and that advanced nations have been characterized by information for millennia. For example, Alfred Chandler and James Cortada argue, while also apparently accepting the sequence logic of the arguments they contest, that North Americans got on the information highway in the 1600s; by the 1800s there were postal systems and roads for mail, copyright laws, newspapers, books, pamphlets, and so forth; by the 19th century there was electricity for developing key information technologies, such as the telegraph, telephone,

phonograph, motion pictures, and so on; and in the 20th century, of course, there came the computer. The point being here that the so-called information age started long before the conventional wisdom on information society would suggest (Chandler & Cortada, 2000; other authors in their collection make similar arguments).

Armand Mattelart argues that the whole idea about a “cyber-frontier” in much of the apologist arguments about informational technologies is a sequel to the grand technological narrative of the conquest of space, giving us clichés such as the “global village,” “information society,” and “information age.” Alongside the two notions of globalization and information society, such apologetic discourse is full of promotional sale pitches, official proclamations, trendy manifestos, scientific or quasiscientific studies purporting to show that these terms are self-evident, and promising a more open and democratic world. The notion of an information society carries with it, according to Mattelart, a body of beliefs that releases symbolic forces that not only enable action but orients it to certain directions rather than others, setting the agenda for action and research programs run by governments and supranational policymakers. I think Mattelart’s view is a bit too committed to notions of sovereignty, but his point about the shaping of conduct (without using governmentality explicitly) is well taken (Mattelart, 2003, pp. 1–2).

As I stated before, I will not take a side in this debate, mostly because it is not relevant to my overall argument about the role of information in the government of individuals. But I do think this entire discourse on the information society, and its derivatives, is interesting in that it often relies upon labor, finance, and educational data, among others, and thus arguments for and against the idea of an information society are based on the very informational technologies they are trying to explain (particularly the database, which barely gets mentioned as part of the processes being described). Second, in terms of governmentality, Christopher May (without resorting to governmentality explicitly) might have a point that the emergence of information-society discourse may have reinforced the observed dynamic and contributed to the actualization of the socioeconomic relations it purports only to recognize (May, 2000, p. 2). But in terms of actual governmental practices, the preeminence of informational technologies that such discourse highlights might contain a self-fulfilling prophecy of sorts. That is, the arguments that we are in an “information age” leads to the transformation of everything into data, and as Böhme argues, the more such transformation takes hold, the more something is considered a part of society just because it can be expressed in terms of data (Böhme, 1997, p. 465).

These discourses on information, information age, information society, and other related concepts, render the notion of society in terms of information and data—indeed, its logic that, say, we are in an information age or, alternatively, simply in an advanced stage of capitalism—as premised on the very privileging of ideas about information and data that should presumably be at issue in this discourse. The questions we should form from this, however, are that once information and data are given the status of telling us what a society is, how will we be governed as a result of such intelligibility? What kind of policies, practices, and subjectivities will be invented, and what kinds of contestations will emerge? At any rate, I will use the terms “information society” as a metaphor for a kind of governmental logic that privileges the notion of technology, information, and data in its rationalities justifying the social administration of individuals and their institutions. Next, I will discuss in a bit more detail the “informational technologies” central to such rationalities.

Technology

Whether or not we are experiencing an information society different from that of an industrial one, there seems little disagreement that information and knowledge are becoming important commodities. One such argument indicates that most advanced nations depend highly on information-based, intangible assets, information-intensive services (especially business and property services, communications, finance, insurance, and entertainment), and information-oriented public sectors (education, public administration, and health care). In the G7 group, at least 70% of the GDP depends on informational products and services and not on physical goods such as agriculture and manufacturing (see Floridi, 2010, pp. 4–5).¹

Given the importance of information to the economy, it becomes subject to intellectual property regimes, with the economic benefits (as well as other kinds of benefits, such as the power to control a message) flowing to those who own such property (May, 2000, p. 1). But that ideational, perhaps even ephemeral, things like information and knowledge can be owned and called “property” suggests something oxymoronically physical about them. These things do not seem to have physicality. And yet they do because despite their diversity, much of information today, certainly what is economically advantageous, is generated by, and transformed, communicated, and stored in various digitizing technologies, which have physical qualities.

Among the key informational technologies at issue in the information age discourse are microelectronics, computing (hardware and software),

telecommunications/broadcasting, optoelectronics, and genetic engineering (the latter focused on decoding, manipulating, and reprogramming informational codes of living matter). The integration of these various informational technologies (i.e., telematics) is made possible because of digitization, which converts into a code (usually binary) what are discontinuous types of information varying continuously in time. This blurs earlier distinctions between communication and its processing, between people and machines, as well as between all kinds of disparate information (i.e., all kinds of visual data, numbers, words, and perhaps soon, all tastes, odors, etc.)—all this may now be reduced to a digital code (see Beniger, 1998, pp. 19–20).

Thus, according to Castells, technologies in biology, computing, electronics, and informatics seem to be converging and interacting in their applications, in their materials, and, more fundamentally, in their conceptual approach. (Indeed, we can speak now of something called “biotechnology” and have it mean something significant in socioeconomic, academic, political, and even corporeal terms.) These technologies create an interface between technological fields via a common digital language in which information is generated, stored, retrieved, processed, and transmitted. “We live in a digital world” (Castells, 1996, p. 30). This seems correct, at least with regard to the information and knowledge that is significant in the economic and political spheres: All such information and knowledge are becoming digitized. And so it is digitization that is the informational technology par excellence.

Digital technologies are qualitatively different from industrial technologies because, as Sandra Bramen argues, they greatly multiply the degrees of freedom with which we can interact with each other and the material world. The increase in flexibility and capacity that results from them has altered the nature of power, the economy, and how we can come together to act in groups and communities (Bramen, 2006, p. xvii). These technologies, however, contrary to the reified views of many people (especially of those with pecuniary interests in having such views, such as Bill Gates), are neither the innocent products of science nor are they determinant of social progress; they are developed, used, and given meaning within social relations. I think Yoko Arisaka is correct that technology appears to be neutral in the same way that a diesel engine is a diesel engine whether created in the United States or in Japan; cultural differences thus seem irrelevant in this respect. From such an observation, many people treat it as if it has a purely instrumental nature of its own (the reification we are referring to above). There can be, however, no separation of what is deemed technological from its cultural milieu—technology is never culturally neutral. The

apparent neutrality, Arisaka continues, comes from the fact that cultures in question have enough similarities that the particular technology in question functions similarly in them (Arisaka, 2001, p. 160).

Information and communication technologies are sociohistorical things, and while they are created by state and business sectors to meet their needs, they are also used, for example, by many individuals and organizations to resist or slow down the implementation of those original interests, or perhaps they use those technologies for entirely new purposes, democratic and otherwise (see Fortier, 2001, pp. 2–3). These technologies may, in many ways, contain within them possibilities for generating forms of democratic participation. Indeed, among other things, civil society is increasingly becoming visible via information/communication technologies (see Dennis, 2007, pp. 19–34); the knowledge individuals may have about political issues may come from these technologies (see Jerit, Barabas, & Bolzen, 2006, pp. 266–282); and such technologies may be significant for how youth form identities and engage the world (see Morimoto & Friedland, 2011, pp. 549–567).

Yet, while technologies should be understood in their social contexts, we do want to attend to the technologies themselves as such, to the ways they can alter perception regardless of the products or contents or messages they produce or transmit, or the social contexts in which all this takes place. Nicholas Carr, in discussing the Internet, argues that when a new technology emerges, people tend to focus solely on its content, but the medium disappears behind whatever flows through it. This is certainly the case with information technologies writ large, in which the focus of much concern is on its content or on its social effects, but not specifically on the technology required to transmit content or generate social effects. Carr suggests that the medium actually alters the content, for it molds what we see and how we see it (N. Carr, 2011, pp. 2–3). The Internet, he argues, when it absorbs a medium (e.g., news reporting), re-creates that medium, dissolving its physical form, injecting its content with hyperlinks, breaking up that content into searchable chunks, and surrounding the content with the content of all the other media it has absorbed. All this changes not only the form of the content but also the way in which we use, experience, and even understand it (as is the case with news reporting, in which one is easily distracted by numerous hyperlinks ostensibly related to the news at issue) (N. Carr, 2011, p. 90).

Within this altered representational, digital, biotechnical scheme, according to Thomas Lemke, the body seems less a physical substrate or anatomical entity than an informational network, something which can be easily amenable to bio-politics (Lemke, 2011, p. 172). These digitizing

technologies provide a crucial link between the deliberations of governmental authorities and the dispersed space of the (inter)national territory, enabling these authorities to trace, manipulate, and transmit all kinds of information, and in doing so direct the course of distant events and people in real time, however imperfectly. The use of such technologies is particularly important if it is the case that individuals use these technologies to act on themselves. Because these technologies, then, can be seen as enhancing the self-governing capacities of individuals themselves, they are specific targets of government authorities, who seek to create an informational base for the entire population in order to allow it to know and thus govern itself (see generally, Barry, 1996, pp. 127–129). So far, however, we have thrown about the word “information” quite indiscriminately and without much elaboration about its own logic, and so we should turn to that now.

Information

The discourses on the information society and on informational technologies all point to the significance of information in our lives, some indicating that this is not a new phenomenon and others that the pervasiveness of informational technologies does indeed restructure our world. Floridi, for example, argues that the pervasiveness of information entails a metaphysical reconceptualization of reality and that it is normal now to consider the world as part of an “infosphere,” a virtual world, understood entirely in informational, instead of material, terms (Floridi, 2010, p. 17). Similarly, Castells proposes that since the last quarter of the 20th century, a technological revolution, centered around information, has transformed the way we think, produce, consume, trade, manage, communicate, live, die, make war, or love (Castells, 1998, p. 1). Again, given the framework I am using, such arguments will be “true” to the extent they become governmental, that is, when their rationalities are put into practice.

At any rate, what exactly is “information?” The discourse on it makes it seem as if it is, well, as Floridi indicates, everything—everything can be thought of in informational terms. In a way, then, information has become a metanarrative, and as such, it warrants further elaboration. There are various ways that the discourse on information has us think about the concept, but here I will focus on three: a mechanical point of view, a philosophical point of view, and, my preference, a sociocultural point of view. I should note that these are my categories and not necessarily ones we would find (explicitly) in the literature. Let me now take each view in turn.

Mechanics

The point of view of information as mechanical downplays philosophical, sociocultural, and historical analyses and focuses on its transmission, functional uses, and other technical matters. For example, in the field of information theory, which to me bridges semiotics, linguistics, mathematics, and engineering, and was made prominent by mathematician Claude Shannon, information is a unit of measurement of the predictability that a transmitted message will be understood. Its practical concern is with the transmission of a message in the most economical way. From this imperative we now understand the notion of a “bit” as a determinate quantity of information—its smallest amount. When Shannon made the notion of information *that* simple, countable in bits, “information” was found everywhere. From this theory, information processing was born, and I think information theory has essentially now become nothing more than information processing. Information theory, at any rate, bridged (or perhaps it is more accurate to say, obliterated) the differences between information and uncertainty, information and entropy, and information and chaos, but it led to compact discs, computers, cyberspace, artificial intelligence, and all the Silicon Alleys of the world (Gleick, 2011, p. 8).

Information theory has been translated into so many fields of knowledge, whether dealing with organic or inorganic things, that, as James Gleick argues, despite the fact that the bit is insubstantial—the smallest unit of information according to information theory—scientists may soon be coming to the understanding that it is primary—more fundamental than matter itself, the irreducible element that forms the very core of existence (Gleick, 2011, p. 10). Information theory, premised on a mechanical view of information, has us now thinking of things in terms of a string of binary numbers (0s and 1s). It is based on probability theory (about which I will say more in Chapter 3) and treats messages statistically, as choices from an ensemble of all possible meanings. Information theory attends to redundancy in a language, which can be understood statistically to reveal patterns, regularity, and order: The more regularity in a message, the more predictable it is; the more predictable, the more redundant; the more redundant a message is, the less information it contains; the less information it contains, the more that can be eliminated from a message; the more information that can be eliminated, the easier it is to compress the message; the more that a message can be compressed, the easier it will be to transmit it (see generally, Gleick, 2011, pp. 328–329).

Shannon was not interested in meaning per se, or of power (i.e., who controls what); he was interested in devising an engineering mechanism by which a message produced by a sender could be reproduced at some other place with the shortest possible time lag. The reproduction must be such that the receiver of the message will be able to understand what the sender meant by the message, at least if he knows the sender's language (see Bar-Hillel, 1955, p. 86). Thus, Shannon was interested in using communication channels to transmit information efficiently, and he did so by using binary digits, driven by the idea of using as few as possible, and to do so he had to uncover the statistical structure of a given language (e.g., by looking at the average frequencies with which various letters occur) (see Rogers, 1964, p. 63). The significance of this cannot be discounted by anyone. Without it, we would not have computers (and computer chips) as we know and use them today, and we would not have the increasingly digitization of information, which allows, as I indicated before, the efficient integration of extremely disparate kinds of information.

This mechanical view of information seems to have the upper hand over other views. It seems to premise the ways information processing is conceptualized in a rather, well, mechanical way. One version of such a view has it that the "life cycle" of information includes occurrence (discovering, designing, authoring, etc.), transmission (networking, distributing, accessing, retrieving, transmitting, etc.), processing and management (collecting, validating, modifying, organizing, indexing, classifying, filtering, updating, sorting, storing, etc.), and usage (monitoring, modeling, analyzing, explaining, planning, forecasting, decision-making, instructing, educating, learning, etc.) (see Floridi, 2010, p. 4).

Not all mechanical views of information fail to account for social structures. Indeed, when one attends to Shannon's theory, we can see that his statistical analyses sought to find patterns, amounting to structures in language. It is a kind of view of information as patterned data, and many versions of semiotics, applied linguistics, information science, and sociologies of knowledge start from the point of view of patterned data, although many of these theories then go on to uncover the social structures and power relations engendered by information (see generally, Braman, 2006, pp. 15–16). And even a mechanical view of the cycle of information processing as discussed above may incorporate sociological or psychological theories of meaning-making. For example, Jeffrey Parsons offered a perspective on information modeling that accounted for how theories of cognition could inform an information system—the idea being that humans organize knowledge about things via categories or classifications (Parsons, 1996). So even mechanical views are not entirely devoid of concerns with meaning,

social structures, and power, but they do tend to treat those things as part of the technical requirements necessary for understanding and making use of information, and thus they are rarely critical of their own theories or presuppositions.

Even less critical are other mechanical views of information that treat it as a kind of resource, a reification of information that assumes its functional or economic uses in ahistorical and asocial analyses. Such a view, much like that of information theory, treats information as quantifiable, leading to the measuring of the number of things deemed important (e.g., emails), and does not include attention to content, uses, or effects, whether behavioral or at the level of meaning formation (see Braman, 2006, p. 12). For example, note the logic of Japan's "Johoka Index," which indicates how far Japan has "informationalized" and compares such "informationalization" across time. In this index, we are given the categories: "Amount of Information" (i.e., telephone calls per person per year; newspaper circulation per 100 people; books published per 1,000 people; population density as a measure of interpersonal communication); "Distribution of Communication Media" (i.e., telephone receivers per 100 people; radio sets per 100 households; television sets per 100 households); "Quality of Information Activities" (i.e., proportion of service workers in the total population; proportion of students in the student age population); and "Information Ratio" (i.e., information expenditures as a proportion of total expenditures) (Dordick & Wang, 1993, p. 33). It also includes measures of what is deemed infrastructure (i.e., telephone main lines per 100 people, television sets per 1,000 people, newspaper circulation per 1,000 people, amount of data terminal equipment in the public telephone and telex networks), economic parameters (i.e., percentage of information workers in the nation's workforce, contribution of information sector to GNP/GDP, contribution of the information sector to productivity in the industrial sector), and social parameters (i.e., rate of literacy; percentage of nation's school-aged children attending tertiary schools) (Dordick & Wang, 1993, p. 60). This counting logic is the basis, I think, for the creation of "information centers," that is, they are based on a logic of seeing information as a resource that can be counted and collected.²

The notion of information as commodity is a particularly strong version of the mechanical and ahistorical view of information. Here information is treated much like other commodities, as that which can be bought and sold, and this seems to ground the economic logic of the information-society discourse (especially the apologetic views).³ It premises notions of intellectual property, about which I will say a bit more later in this chapter. But in short, this view is very salient in economic texts and assumes information

as merely one of a category of items that can be traded for a price, and it is assumed that economic agents desire information because it helps them to maximize their interests (see, for example, Allen, 1990).

At any rate, there are perhaps many other versions of this mechanical view of information, but the point here is to highlight that such a view is less concerned with questions of power than other views, and it downplays philosophical and sociocultural understandings of information, when it does not ignore these understandings altogether. This view renders the “reality” of information in terms of its logic and makes itself technical in the proliferation of (a) technologies premised on information theory, (b) scientific research agendas and departments (e.g., information science, informatics, economics, biotechnology) premised on information theory and on the idea of information as a resource, (c) organizational practices based on the idea of information as a resource (e.g., the creation of information systems and chief information officers), and (d) attempts to sell and control information deemed a commodity (e.g., intellectual property regimes), and on and on. The mechanical view of information should therefore be looked into for the ways it makes itself technical in shaping conduct in the various practices I just listed—actually, all views of information should be looked at in such a way.

Philosophy

With regard to the philosophical view of information, here the issue is primarily one of epistemology and in particular with what makes information meaningful and how it differs from knowledge or truth. Michael Perelman is probably correct that while the dictionary definition of information is the communication of knowledge, in fact the concept has expanded to the point that it has become a vague metaphor; almost everything can now be thought of in terms of information, likely as a result of the widespread codification of information that simplifies its transfer (Perelman, 1998, p. 10). Because of such codification, Perelman creates an opposition between wisdom and information, which is devoid of any moral or social values and is entirely operational (Perelman, 1998, p. 10). This logic that information seems to be becoming improperly synonymous with knowledge or wisdom seems to undergird the epistemological concerns with information.

Floridi, for example, rejects the epistemological grounds of much of information theory, particularly the assumption that information entails data + meaning that is predominant in fields that treat data and information as reified entities (e.g., information science, information management, database design, etc., and in many uses of so-called “data mining,”

about which I will say more in Chapter 4). Floridi argues that this definition is dubious, and it should be modified to define information as well-formed, meaningful, and truthful data (Floridi, 2005, pp. 353, 367). Sven Hansson is similarly concerned with truth when he argues that knowledge and information are not the same things. Knowledge is a composite concept, a species of belief, and so knowledge (but not information) must entail a true, justified belief (Hansson, 2002, pp. 39–40).

There are other attempts to distinguish knowledge from information, while not necessarily committed to notions of truth. Stehr, for example, argues that knowledge is a model for reality that enables actors to put something in motion. Information, however, is something actors have and get; it does not require cognitive skills (knowing); it is also not as situated as knowledge, and thus has built in insecurities and uncertainties (Stehr, 2001, p. 44). Today, Stehr continues, practical experience and empirical knowledge are being pushed out by subjective probability calculations. The potential damage or risk to social action is no longer determined by experience and by trial and error but has to be anticipated (Stehr, 2001, p. 44).

Such epistemological (but also sociocultural) critiques of probability theory take as their points of departure the idea of information as mechanical, but are very critical of such mechanical views as expressed, especially, in information theory, which many argue entails a blind belief in numbers. Mattelart argues that during the 17th and 18th centuries, mathematics was enthroned as the model for reasoning and useful action, and thinking in terms of what is countable and measurable became the prototype for truthful discourse and the desideratum for the perfect society (Mattelart, 2003, p. 5). One can read this imperative as the basis for Shannon's definition of information as strictly statistical, quantitative, and physical, ignoring the etymological root of the word "information" that denoted the process whereby knowledge is given form by structuring fragments of knowledge. Instead, Mattelart continues, the problem of information became one of calculating probabilities and seeking efficiency of transmission. Meaning has no place here, and communication is severed from culture. All this was made easier by the human sciences, which were eager to share in the legitimacy of the natural sciences and thus raised Shannon's theory to the level of a paradigm (Mattelart, 2003, pp. 56–57).

Mattelart goes on to argue that this fuzzy notion of information continues into that of information society and that giving political legitimacy to the idea that such a society actually exists overcomes any misgiving prompted by epistemological caution. Information is becoming increasingly assimilated to the statistical term "data" and identified as such only where there is a technical apparatus to process it, and so a purely instrumental

concept of information society takes hold that blurs the sociopolitical stakes underlying an expression that was supposed to designate the new fate of the world (Mattelart, 2003, p. 62). I am partial to this view, but I am not sure if underlying it is a promotion of a more legitimate kind of knowledge. Such a view tends to give philosophers an arbiter role in determining which knowledge is legitimate and which is not, a role that they have defined for themselves but at the cost of seeing how their views also work in the processes of government. At any rate, Mattelart's and Stehr's arguments straddle the philosophical and sociocultural views of information, and so I can now turn to the latter view.

Socioculture

The sociocultural view of information is concerned with the role and impact information has in economic and political affairs, in intellectual circles, and in social struggles. Gleick argues that information is now what our world runs on; it pervades the sciences from top to bottom, transforming every branch of knowledge—what started as a bridge from mathematics to engineering now extends to biology, which seems to have become an information science, living matter being a subject of messages, instructions, and code (Gleick, 2011, p. 8). The epistemological justification for the ubiquity and pervasiveness of information is probability theory, and so there is now a sense in which the “law of large numbers” has made it possible to spend energy trying to figure out just how to apply statistical reasoning to society—perhaps at the expense of all other things (see Braman, 2006, p. 18).

Many critics suggest that the societal effects of the fact that we can convert all kinds of things into information, and that we have the ability to collect massive amounts of information, are, if uncertain, also very disconcerting. Gleick discusses some of these concerns. He points to the line in Jorge Luis Borges' 1947 story, “The Library of Babel,” that reads, “The universe (which others call the Library)” and indicates we should change it to, “This Library (which others call the universe)” (Borges, 1998). Every word that can be said, everything that can be done, can now be recorded and encrypted, and in theory can be recovered given enough computing power (Gleick, 2011, pp. 373–377). This is the logic of Wikipedia, which started off with experts, academic credentials, verification, and peer review, but when the idea of the wiki took off, it became a self-created and self-sustaining phenomenon. Gleick argues that in Wikipedia, reality cannot be pinned down with finality, an illusion fostered in part by the leather-and-paper encyclopedia. Despite the disdain many academics have for Wikipedia, its use and authority seems unlikely to end soon (Gleick, 2011, pp. 382–383). Now

we can say we are shifting to the cloud, which, of course, hides the very real physical infrastructure of the computers that can hold all this information. As Gleick points out, we can now legitimately ask how much information there is in the universe—he points to an MIT engineer who has it at 10^{120} “ops” in its entire history, and that it could hold something like 10^{90} bits and perhaps even more (Gleick, 2011, p. 396; see also Lloyd, 2001).

Gleick’s view seems focused on the societal effects of information, but he seems uninterested in being more critical of the inequality and exploitation associated with information. In particular, there is a fear that the commodification of information has and will continue to reinforce class structures. For example, Perelman, while acknowledging that information technologies have greatly expanded the economic potential of society, their benefits are not evenly distributed intra- and internationally (Perelman, 1998, p. 4). Social and economic inequality is furthered by the fact that much of information can now be controlled by those who can claim ownership of it, and because of this they wield immense power in the processes of social control, a point I discuss next. Another highly critical view of information is also premised on a logic of control but one I will frame as “surveillance.” This argument is concerned with violations of privacy and other civil liberties because of the massive collection of information in databases, and I will expand on this argument to conclude this chapter. These two latter arguments are parts of the social-cultural view of information, but I think they are important enough to warrant their own sections in this chapter.

Control

Some might believe that science possesses strong attributes that allow for effective resistance to efforts by large institutions to concentrate or even monopolize science and technology (see, for example, Stehr, 200, p. 30), but there seriously cannot be questions about how the commodification of knowledge and information leads to such concentration and monopolization by nation–states and by large corporations. With regard to the concentration of information by nation–states, we can say first that nation–states are mastering the same types of informational power that corporations and other nonstate actors have been successfully using in their challenges to geopolitical entities. Second, neoliberal state policies increasingly use private entities as regulatory agents, turning private centers of power to state purposes. And finally, nation–states are increasingly “networked” in fundamental ways to each other and to other state and nonstate actors (see Braman, 2006, p. 34). Large multinational corporations control much of the information/communication technologies discussed previously, but we

can also say here that such control is given juridical force by the creation of strong intellectual property rights in information that allows more and more private corporations to profit from the sale of information as a commodity (see Perelman, 1998, p. 11).

The (originating) logic of intellectual property rights is that because society benefits from the dissemination of ideas, inventions, and other intellectual creations, and to encourage such creations, the creator is given the state-sanctioned right to benefit from his or her creations; essentially, the logic of intellectual property is that of an exchange—for the public's ultimate use of the fruits of intellectual creations, the creator is given a monopoly on the use of his creations for a set period of time (which, in the United States, is continually being expanded). Informational goods are valuable primarily because of their symbolic components rather than their physical substance or mode of delivery. But unless they are commodified and protected by intellectual property regimes, their value cannot be possessed and exploited once they have been publicly circulated (Coombe, 2003, p. 281). The protection of existing property rights in information propels modern capitalist power to heights not envisioned by the originating logic of intellectual property. To be sure, the history of capitalism has always been one of expansion, but in the past, the law did not protect "information," only "creative" products and activities arising from information. During the last few decades, however, we have witnessed an unprecedented increase in legally recognized patentable subject matter (including living matter), as well as the extension of intellectual property protection to mere aggregations of data (Coombe, 2003, pp. 281–282).

The digitization of information has changed all this and has given information a kind of physicality that did not exist before. And courts everywhere are moving to protect more and more claims of intellectual property in information, even though the broader circulation of information is better for society as a whole—and even for intellectual creativity and the production of technologies themselves. Ironically, even though the creation of technologies is made possible by access to information, the very creation of information technologies makes it difficult to maintain exclusive control of information, thus the significance of intellectual property rights, the quest for which, of course, increases the monitoring of workers and agents working for corporations (and universities, etc.). What this means in effect is that the power of the state stands behind those who hold the rights to information in a very direct fashion (see Perelman, 1998, pp. 80–82).

As Christopher May indicates, in the past information or knowledge necessary to produce a commodity was embedded in its realization, but today it appears that information and knowledge have been accorded separate

values and disarticulated from their carriers. Thus, the predominant knowledge industries are those in which value stems primarily from the utilization of information itself. And this has led to a growing recognition that the tacit knowledge of employees is often one of a company's most valuable assets and inputs, however hard it is to quantify or capture this knowledge. As knowledge has grown in importance to a company's economic interests, it will wish to capture such knowledge for its exclusive control (May, 2000, pp. 5–6). And intellectual property regimes allow those companies that successfully claim ownership to legitimize their interests through juridical means. So while capitalism may have widened itself temporarily and spatially, as the discourses on information society and globalization have taught us to think, it most certainly has widened itself through its penetration into previously noncommodified (and perhaps noncommodifiable) things and social relations via intellectual property regimes (May, 2000, p. 12).

Thus, along with nation–states, large corporations enjoy great control over information “resources” (which include actual workers in the information economy, such as systems analysts, academics, etc.), and combined with the fact that these large corporations own formerly public resources because of privatization, and that media is increasingly becoming concentrated in these corporations, we certainly can say without qualification that the increasing centralization and monopolization of information is not overstating matters. What this means, as Perelman points out, is that in addition to withholding information from the public, the owners can also manipulate and censor information, distorting the public's understanding of situations, and making it more difficult for people to challenge what is happening to them (Perelman, 1998, p. 78). Perhaps from a policy perspective, what allows such control of information may be the idea that information *is* knowledge, and because knowledge tends to be viewed as transparent and as decreasing uncertainty (a very significant desideratum in the West, as I will explain in Chapter 3), only good things can come from all this (see generally, Winseck, 2002, p. 94).

But the monopolization of information leads to extensive control by those who control information, and this makes things more, not less, uncertain, not only for individuals but for nations, especially those in the “periphery” of the information economy (see, for example, Shafiu Alam Bhuiyan, 2008, pp. 99–116). As Rosemary Coombe argues, intellectual property is a doctrinal field that relies on Western understandings of progress, science, and civilization, and it is central in global efforts that purport to respect, preserve, and value local knowledges. These efforts deploy, she continues, a peculiar discourse of power and persuasion that, among other things, depoliticizes exploitation and uses notions of authentic culture as justification

for harnessing information so that it can be transformed into privately held works of intellectual property that are deemed to further technological progress (and economic gain) (Coombe, 2003, pp. 274, 280).

This phenomenon is not simply about the control of information or the products deriving from it. This is about controlling people; there would be no point in controlling information otherwise, for information is an intellectual property, which derives from, well, the intellect. Perelman makes a good argument about how the collection of information has the ultimate object of controlling people (Perelman, 1998, p. 31). I read his excellent analysis of Frederick Taylor's scientific management as government through information (he does not appear to think in terms of governmentality, however). He points out that Taylor's scientific management was essentially concerned with deskilling workers. Taylor understood how the labor workforce used its strategic information ("traditional knowledge") to organize its work, teams, as well as to monitor itself. Taylor insisted that management needed to discover this information so as to give it an advantage over its labor force. Perelman quotes Taylor:

The deliberate gathering in on the part of those on the management's side of all of the great mass of traditional knowledge, which in the past has been in the heads of the workmen, and in the physical skill and knack of the workmen, which he has acquired through years of experience. The duty of gathering in of all this great mass of traditional knowledge and then recording it, tabulating it and, in many cases, finally reducing it to laws, rules and even to mathematical formulae, is voluntarily assumed by the scientific managers. (Perelman, 1998, p. 40)

Taylor's implication here is that scientific management made traditional knowledge obsolete, and since the interests of scientists supposedly would not differ from those of management, firms could gain power at the expense of their workers via scientific management.

According to Perelman, Taylor's logic dovetails with the information economy, in which the specialized workers are those actually working with information—at least the kind of information of concern to the economy. Because these workers are especially important to the economy, there is a need to bring them under even more control than is the case with other types of workers (Perelman, 1998, pp. 39–42). In effect, granting organizations property rights to information means that they will need to control the people in whose brains that information resides (Perelman, 1998, p. 82).

It is not merely workers who are controlled by and because of information. If it is true that people are governed through consumption, and if the

role of consumption is increasing, then we must attend to how it coincides with the digitization of information. If much of human experience comes to be seen as “data,” information becomes the very currency of consumption. It seems true, then, that information and consumption have become dominant practices in the world. And so now we are bombarded by a plethora of lists telling us what are the “top ten,” “best of,” and so on, as well as an inundation of the consumer market with buying guides, idiot guides, FAQs, and similar texts intended to help us navigate information and tell us what to consume (Cohen & Rutsky, 2005, p. 2). Yes, indeed, we are told how to consume information, but more important to me is that we should see all these commercial texts as parts of a governing tactic whose ultimate target seems to be our subjectivities, in order to turn us into consumers, who comport ourselves with what is deemed to be “the best,” “most popular,” and so forth. It is in this way in which the notion of information as commodity also becomes governmental.

To conclude this section, the issue of social control, according to Daniel Bell, can be put under three headings: expansion of the techniques for surveillance, concentration of the technology of record keeping, and control of the access to strategic information by monopoly or government imposition of secrecy (Bell, 1989, p. 98). This seems a reasonable schema. The dimension relating to the control of access to information has been my concern in this section, and I will return to it more or less explicitly in Chapter 4. The dimension of control relating to recordkeeping I reframe as one of accountability and discuss that in Chapter 6. Next, however, I will discuss in greater detail the dimension relating to surveillance.

Surveillance

Much of the concern about the collection of information, especially by nation-states like the United States, centers around the violations of privacy and other civil liberties, and in some cases, more drastic violations in the name of fighting terrorism (see Branam, 2006, p. 314; Fortier, 2001, p. 81; Perelman, 1998, p. 76). Indeed, the “war” on terrorism in the United States has justified a permanent state of exception in which the State is entitled to watch our every move (and to strip away any civil liberties if it suspects us of aiding terrorism—or, more accurately, if it merely says we are). The concerns with surveillance and privacy are particularly prominent with regard to the massive databases that currently shape our lives, and about which I will have more to say later in Chapter 4. Perelman argues that these databases are panoptical, containing massive information about individuals, keeping track of them, yet completely opaque to the individuals

under “observation.” Moreover, in a sense, these individuals cannot observe back—and perhaps observe even themselves—without the help of those who control the databases (Perelman, 1998, p. 72).

The concerns about surveillance via information technologies extend beyond potential violations of civil liberties; the fact that much information about individuals is collected in various, massive databases allows others to profit from these data. Who one may be, what one may buy, what might be one’s tastes, habits, and wishes—indeed, any and all information—assists firms in designing a marketing campaign, evaluating everyone’s credit, or making investments in new activities that can have considerable value to them (Perelman, 1998, p. 73). John Palfrey and Urs Gasser contend that all the digital information held in many different hands about a given person makes up her digital dossier, and the primary cost of progress in terms of convenience, efficiency, and productivity is that we are losing control of these dossiers (Palfrey & Gasser, 2008, p. 39). Furthermore, those who control information can also dictate the terms of political debate in order to induce the majority to vote against their own interests, as we can see in Conservatives’ arguments for tax cuts, which appeal to all voters but really only apply to the wealthy (Perelman, 1998, p. 74). And, we can also recast concerns about the social control of the workplace via information that we discussed in the previous section as reflecting an unease with the pervasive hierarchical surveillance and monitoring of workers, and as the unabashed violation of workers’ privacy, all in the sacrosanct name of efficiency and ownership prerogatives (see generally, Fortier, 2001, pp. 36–37).

My greatest concerns about surveillance are related to state action, for the State can always install the state of exception. Not only does the increasing use of sophisticated information collection systems present a clear threat to personal privacy, but the tendency to address this problem of privacy via extensive computer security mechanisms has its own pitfalls. Computer security could limit citizens’ access to government documents and ultimately their right to know about many public decisions affecting their lives. Thus, for some, computer security should be but a single, though important, element in a broader policy aimed at defining the kind of information local agencies should be allowed to collect and who should be granted access to it (see generally, Stallings, 1974, p. 197).

For others, the issue is more complicated. Informational policies that give identity to the State are based on a logic that uses statistical mechanisms to offer information about various aspects of itself, creating narrative representations of what it considers to be its real—or what it knows is not—history, choosing which data and representations to “remember,” and deciding who has access to any of this information (see Braman, 2006,

p. 138). And so information policies purporting to give access to the public do not necessarily entail access to State decision making, for, say, data held in databases about individuals is often “perturbed”—falsified slightly—so that it is (ostensibly) more difficult to extract actual information about individuals from aggregate data. Indeed, the information in the database might replace actual always-unique histories with statistical probabilities (Braman, 2006, pp. 140–141).

The concern with statistical probabilities may be central to the matter at hand with regard to surveillance. Today, statistical profiling is at the heart of the means by which state entities identify citizens as targets of surveillance (Braman, 2006, p. 142) and subjects them to the exception that justifies their disenfranchisement—and even death. At any rate, Susan Braman seems correct that statistics drives information policy without regard to normative imperatives, and perhaps without regard to legislative intent (Braman, 2006, p. 143) (e.g., as in the case of the U.S. Patriot Act, which has been used to collect information about many things other than suspected terrorism). What is clear is that the State can know more and more about individuals because of the pervasiveness of digital technologies and the ability to integrate disparate kinds of information into a common language, but individuals know less and less about the State (Braman, 2006, pp. 314–315).

Moreover, information here can be a limiting governmental technology in terms of civic participation, since the individual can rarely know as much about the State (or her employer, or the corporation affecting her life) because she cannot access this information easily. Thus, as Braman argues, digital technologies may actually decrease meaningful participatory democracy, for the State (or a corporation) can collect much more, and “better,” data than most individuals can, and it can turn that information into whichever proactive or persuasive narratives (propaganda?) suits its objectives, while the individual disappears into a mere probability (Braman, 2006, pp. 316–319; see also Fortier, 2001, p. 82). Yes, individuals are subject to probabilities, but it seems to me more accurate to say not that the individual disappears but instead that she is framed as a mere number that obscures what is actually happening (or will be happening) to her.

Information, to conclude this chapter, is more than an empirical concept, or even an ideological one. Most critiques of the practices, forces, or ideas associated with information assume its materiality, but “information” may be, foremost, a technology of government. Its primary role is to frame what individuals are, to watch them, to establish the exceptions that will allow them to be disenfranchised, and to control what individuals can

know—and thus do—about themselves, their workplaces, the market, the State, the . . . everything.

Notes

1. Floridi also argued that while these technologies have brought enormous benefits to people, they also carry significant risks and generate dilemmas about the nature of reality, fairness (e.g., the digital divide), our responsibilities to future generations, our understanding of a globalized world, and our interactions with the environment (p. 7).
2. One early example of a reference to “information and documentation centers” was in the field of education, with the establishment of the Educational Resource Information Center (ERIC), among others. See Forman (1978).
3. Indeed, economics may be recognizing itself as an information science, according to Gleick, now that money itself is completing a developmental arc from matter to bits and stored in computer memory. See Gleick (2011. p. 9).

3

Statistics

Reason

In this chapter, I will discuss statistical reasoning in governmental rationalities. Statistical reasoning is central to bio-politics, as I discussed in Chapter 1; it seems, indeed, to have become the knowledge par excellence of modern governmentality. “Knowledge” seems to be the purview of philosophy, specifically epistemology, but as I have been implying in this book, this is an improper usurpation by philosophy, or more precisely, epistemology seems an inadequate basis for gaining an understanding of the role that particular kinds of reasoning play in a society in shaping the reality that society experiences; that is, situating knowledge solely within epistemology fails to account for the role of knowledge in government. I will therefore take a more sociological (and critical) stance toward knowledge, reasoning, and thought.

I will side mostly with those who argue that knowledge is best conceived as culture, as parts of the practices and processes by which social meanings are constituted (see, for example, McCarthy, 1996, p. 1). I hope, however, not to reify “culture”; that too is part of the practices by which social meanings are constituted. So, in a sense, I will suggest that much like culture,

knowledge is determined in and by social practices and rituals, which then become constitutive of “knowledge.” The digitization of information certainly allows us to see more easily that “knowledge” has a kind of physicality that we tend to ignore by seeing it in terms of beliefs. I agree also with E. Doyle McCarthy that knowledge’s function in a society includes integrating social orders, providing coherent and meaningful senses of reality, rendering and preserving identities, and legitimating actions and authorities. Knowledge, then, does not just describe social realities; it builds and (re) configures them (McCarthy, 1996, p. 5). What counts as knowledge, therefore, cannot be separated from historically specific forms of social intercourse, communication, and organization, and as we construct our realities in terms of concepts like globalization or information, we must attend to the powerful role that these concepts play in making and remaking such realities (McCarthy, 1996, p. 23).

Sociologies or histories of knowledge have been attempted by many others, and so I will not be doing that here. I want merely to offer a context for the claims I want to make about statistical reasoning and its role in government. Specifically, I want to dispel critiques of my argument that focus on philosophical notions of logic, warrants, truth, and so on. I want to stress that my argument is not premised on deciding which knowledge claims are more legitimate than others, but to indicate how dominant claims to knowledge are put to use in the arts of government. So with this caveat, I want to say a bit about Western rationalism, specifically the dominance of technorationality, which I will define, though others may not, as subjecting all phenomena to mathematization, instrumentalism, scientism, and utilitarianism.

I am partial to the critical theorists’ arguments about instrumental reasoning (which I will call here “technorationality”), though I am less inclined than they might be to believe that beyond this rationality, or perhaps in opposition to it, there is a “purer” kind of knowledge. But to the extent they have given thought to the consequences of technorationality, I think they are correct. Critical theorists use Max Weber as a point of departure for the argument that instrumental reasoning is characterized by the growth in (a) the mathematization of experience, and in particular the shaping of all inquiry according to the model of the natural sciences; (b) a means-end rationality, whereby a given and practical end is attained *only* by the use of an increasingly precise calculation of means; and (c) an ethics that is systematically and unambiguously oriented toward fixed goals (Held, 1980, p. 64). Critical theorists agree with Weber that such instrumental reasoning arose with industrial capitalism, has undermined traditional worldviews, and would continue to expand and lead to further bureaucratization. And

they agree with Weber that such reasoning would itself become a form of domination, with means becoming ends and social rules becoming reified objectifications demanding constant direction. They part company with Weber's attribution of this to the increasing technologicalization of society and argue instead that this should be understood in terms of the imperatives of capitalist production (Held, 1980, pp. 64–65).

For critical theorists, the ideas of individual competitiveness and autonomy are façades of capitalism, and under industrial capitalism individual achievement was transformed into labor productivity figures; that is, the individual's performance came to be measured by external standards pertaining to predetermined tasks. Eventually this logic extended to all kinds of social experiences; technorationality thus became the framework for the whole of society. In a society like ours, they propose, thinking objectifies itself into an automatic, self-activating process, one conflating calculation with rational thinking, one determining that whatever cannot be reduced to numbers is illusory. This technorationality mimics a machine that reproduces itself so that ultimately an actual machine can replace it (Held, 1980, p. 67). Without couching this in terms of government, critical theorists came to see that technorationality became a mode of governing individuals. It transformed external compulsion and authority into modes of self-control and self-discipline. Individuals who seek to maintain some control over their lives have to act in accordance with the standards that ensure technorationality and capitalism (Held, 1980, p. 69).

I find these arguments sound to a large extent. My bias toward governmental analytics does not lead me, however, to the kind of linear notions of domination that are assumed by critical theorists. I will be frank here and say that despite my biases toward governmentality, I have been influenced by critical theorists too much to reject their logic too easily, so I will part company with the arguments I described above only in two respects. First, I do not want to go as far as suggesting that there is an inherently more legitimate kind of reasoning—I do not see how any form of socially accepted reasoning is not external to the individual as critical theorists indicate is the case with technorationality; that is, that it establishes standards external to the individual and overrides their subjectivities. This presupposes an individual that is capable of being asocial. Second, I will not go as far as assuming that the kind of self-discipline required by technorationality should be framed in the logic of domination. As I discussed before, modern forms of government are not necessarily motivated by domination; their logic is one of working on the individual's freedom.

But other than these two respects, I am inclined to believe critical theory's tenets about technorationality (even that it is geared toward entrench-

ing capitalist logic into our very beings). But I want to focus here on critical theory's tenet that technorationality mathematicizes experience, and to understand this fully, we should begin with critical theory's arguments about modern science. Science established a purely rational, ideational world as reality (and religion, customs, etc., amounted to nothing more than illusions), and it established itself as solely being able to comprehend systematically such a world. Within such a world, everything can be understood in mathematical terms (see generally, Held, 1980, pp. 160–161). From this evolved a technorationality that recognizes only empirical evidence as true, and which persistently aims at classification, quantification, and control (see Feenberg, 2001, p. 139).

Herbert Marcuse, in particular, argued that in its efforts to establish a mathematical structure of the universe, the new science, as he called it, abstracted itself from the empirical individual and that such an abstraction was validated by its result: A “logical system of propositions which guided the use and the methodological transformation of nature and which tended to produce a universe controlled by the power of man.” What such a science produced is a (physical and social) reality reduced to mathematics, one that could be measured and that will define actions in its terms of calculability and predictability (Marcuse, 1989, p. 120). What will get lost, of course, are moral and ethical considerations of what this world should look like.

Some may not feel as comfortable with the critical theorists' assumptions about Marxism, progress, and so on, and instead view this in terms of “the postmodern condition,” as Jean-François Lyotard proposed. He argued that the status of knowledge has been altered in the postindustrial or postmodern age and that the leading sciences and technologies have to do with language: phonology and linguistics, communication and cybernetics, modern theories of algebra and informatics, computers and their languages, information storage and data banks, telematics and intelligent terminals, and so on (Lyotard, 1984, pp. 3–4). Computer technology is already changing the ways in which knowledge is acquired, classified, exchanged, and exploited. Knowledge must fit these new computerized modes and becomes operational when it is translated into quantities of information. Along with the hegemony of computers comes a certain logic, and therefore a certain set of prescriptions that determine what kinds of statements come to be accepted as giving us knowledge, and, I would argue as well, that such prescriptions also define not just what we consider as knowledge but how we come to receive it (Lyotard, 1984, p. 4). In other words, what comes to be defined as knowledge has to meet the standards of statistical reasoning and that it increasingly derives from information stored in databases, as I have indicated before and will do so again in Chapter 4.

Lyotard seemed to be concluding from his analysis much of what critical theorists would agree with, that is, that what this all means for knowledge, culture, and society writ large is that what is deemed worthy is that which can be exchanged and sold—essentially that knowledge is becoming commodified, which will lead to or exacerbate inequalities within and across nation-states (Lyotard, 1984, pp. 4–5). I will not disagree with this, but my interest in this argument is limited to attempting to situate statistical reasoning within a particular historical sociopolitical context and whether or not it is caused by or leads to capitalism nevertheless entails a technorationality that reduces all significant forms of knowledge to mathematics, statistics, and numbers in order to render reality calculable and thus governable via notions of probabilities, a phenomenon I will discuss in greater detail later in this chapter.

What seems to me to be the case, regardless of its cause, is that modern societies are governed by a scientism that makes what is knowable that which is calculable.¹ Friedrich Nietzsche seemed correct in this regard. The will to power is present in attempts by a particular group to increase its power by rendering reality calculable so as to base its scheme of behavior on it (Nietzsche, 1968, p. 266). He argued that to be able to calculate reality, to express it in formulas, we must find causes, and if we cannot we must invent them. But it is an illusion to believe we possess knowledge when all we are actually doing is simply expressing an event in a mathematical formula (Nietzsche, 1968, pp. 334–335).

In the progression of such scientific thinking (I would call it scientism), following Daniel Bell, the problems dealt with are not those of a small number of variables but those of ordering gross numbers (e.g., the motion of molecules in statistical mechanics, the rates of life expectancies in actuarial tables, the distribution of heredities in population genetics, etc.). The logic of gross numbers becomes the problem of averages (e.g., the distributions of intelligence, the rates of social mobility, etc). All these things are made knowable by advances in probability theory, which could specify results (and our responses to them) in chance terms (Bell, 1976, pp. 28–29). This, of course, is no ordinary mathematics, concerned with abstractions, but with an applied version: Statistics. This kind of “intellectual technology,” as Bell calls it, substitutes algorithms (i.e., problem-solving rules) for intuitive judgments; it is based on statistical formulas; it is embodied in computer programs; and it strives to formalize decision-making (Bell, 1976, pp. 29–30). Bell argues that this intellectual technology realizes a “social alchemist’s dream” of ordering society, an attempt to aggregate patterns in the billions of unpredictable decisions we make each day. When the dream falters, he continues, we attribute it to a resistance to rationality. But it may

actually be that such failure is the result of the very idea of such rationality, which defines function without a justification of reason (Bell, 1976, p. 33).

This discussion, I hope, has thus set up the context for my main arguments about statistical reasoning and its role in government. Perhaps because of the technologicalization of society, capitalism, or other socioeconomic phenomena, we are now in a place in which technorationality is the logic of decision-making, not only about the government of others but of one's self. I want to focus more specifically on statistical reasoning in technorationality, but before I do so, I want to take a slight detour and discuss the political use of numbers in modern forms of government.

Numbers

Nikolas Rose argues that numbers have achieved an unmistakable political power in modern liberal societies, at least for four reasons. First, numbers determine who holds power and whose claims to power are justified; they confer legitimacy on political leaders, authorities, and institutions. Second, numbers operate as diagnostic instruments for political governments; they promise to align the exercise of public authority with the values and beliefs of private citizens. Third, numbers make modern modes of government possible—because they make things intelligible, calculable, and practical through numerical representations—and assessable—because numerical representations and comparisons are essential to the critical scrutiny of all kinds of authority. Fourth, numbers are crucial because they offer information about all of the dynamics of populations (e.g., deaths, births, demographics, etc.) (Rose, 1999, pp. 197–198). Political judgments entail explicit and implicit choices about what to measure, how to measure, how often to measure, how to present what is measured, and how to interpret what is measured (Rose, 1999, p. 198). Indeed, it is hard to imagine much of political life without numbers (e.g., political leaders attend to numbers in polls; we attend to the number of undocumented individuals in a population as justification for immigration reform; we attend to the number of uninsured persons in order to justify health care; we attend to test score numbers to determine whether a school is failing; etc.).

We craft narratives from the avalanche of numbers permeating our world, especially statistics. This is true even when the number is only 1. Indeed, according to Kathleen Woodward, one is the numerical sign of the individual in the liberal imaginary. Because of 9/11, we have succumbed to a fear of even small numbers—a single terrorist terrifies us, as terrorism is supposed to do (Woodward, 2009, p. 219). Even though we live with the law of large numbers, as I will discuss in the next section, the number 1 “tells”

us many things. For example, it tells us that one black president means we are postracial; or that the killing of one black teenager by one white man in the United States means that we still live with violent forms of white racism (of course, in this latter case, there is not just one case—but the point here is that of a specific story of 1), or, alternatively, that one black kid is a transcendental threat to all of law-abiding society (read as: white society).

And yet, despite the fact that numbers allow us to craft narratives that render social phenomena “real,” and thus support bio-politics and make political intervention legitimate, they also depoliticize issues. They appear merely as technical mechanisms for making political judgments, prioritizing problems, and allocating resources. They offer the kind of objectivity that makes decisions appear as nonpartisan (see Rose, 1999, p. 198). The whole discourse on undocumented individuals in the United States, for example, takes place in numbers, which allows each side to speak as if disinterested in taking a stance on the moral questions associated with the issue of immigration. To justify immigration reform and amnesty, we resort to numbers (e.g., the number of undocumented persons in the country, the number representing the amount of income they generate, the number representing the years necessary to establish residency, the number representing the age at which undocumented children were brought into the country through “no fault of their own,” etc.) (for an example of such numeric logic, see Erisman & Looney, 2007). And we resort to numbers to argue against immigration and even to mask xenophobic agendas. The recent report sponsored by the Heritage Foundation against immigration reform authored by Robert Rector and Jason Richwine offered incredibly exaggerated numbers representing the costs of immigration reform, a report so scandalous that even many Republicans repudiated it (Rector & Richwine, 2013).²

The issue of immigration, then, offers us an illustration of how numbers mask as disinterested various moral and political discourses, and of how a certain kind of knowledge is linked to governmental intervention. While numbers are not constitutive of all knowledge, key knowledges privilege numbers (e.g., accounting, business, demographics, economics, education, informatics, marketing, medicine, public health, psychology, psychometrics, sociology, statistics, etc.). As Rose argues, numbers are particularly important for government in three specific ways. First, they problematize an issue: In modern forms of government, to problematize an issue is to count it, what is counted is problematized; to count something is to define it and make it amenable to government; to govern a problem entails counting it. Second, numbers are linked to the assessment of governmental practices: To measure the success or failure of state action entails defining changes

quantitatively.³ Third, numbers are essential to an authority's claim to legitimacy: Authority is legitimate because it is representative (of, say, a majority of citizens, etc.) (Rose, 1999, p. 221). And in all this, it is especially the numbers in statistics that have been the key technologies of governmentality since the 19th century. So let us now turn to statistics.

Statistics

Nietzsche argued that science is our way of putting an end to the complete confusion in which things exists, and so it comes from a dislike of chaos (Nietzsche, 1968, p. 324). This desideratum seems the basis for the technorationality that governs our time, or what Bell calls the "intellectual technology" of the "postindustrial society," one that defines rational action in terms of constraints (i.e., costs) and contrasting alternatives, and all such action takes place under conditions of more or less certainty or risk. Certainty exists when the constraints are fixed and known; risk is when outcomes are known and the probabilities for each outcome can be stated; uncertainty is when outcomes can be stipulated but their probabilities are unknown (Bell, 1976, p. 30). This intellectual technology defines decision-making as a "game" in which each person's course of action is necessarily shaped by the reciprocal judgments of others, and the best desirable action is one that ostensibly leads to an optimal solution, that is, one that maximizes intended outcomes and minimizes losses (Bell, 1976, pp. 30–31; see also Mattelart, 2003, p. 80).

Calculating probabilities is, of course, the purview of statistical reasoning, the intellectual technology we are actually discussing here. This intellectual technology has shaped epistemology so that today, following Ian Hacking, we can speak of using evidence, analyzing data, designing experiments, and assessing credibility in terms of probabilities. It has also shaped ethics, so that it now offers the basis for all reasonable (value-laden) choices by state officials, and it seems that no public decision, policy analysis, or military strategy can be conducted without a calculation of probabilities. By covering opinions with a veneer of objectivity, Hacking argues, we replace judgment with computation. "Probability is, then, *the* philosophical success story of the first half of the twentieth century," (Hacking, 1990, p. 4) and I would argue, still is.⁴ Probability and statistics crowd in upon us: All our pleasures and vices are relentlessly tabulated—our sports, sex, drink, drugs, travel, sleep—nothing escapes statistical reasoning (Hacking, 1990, p. 4).

Hacking's brilliant analysis of the rise of statistics in the West warrants summary here. He argues that the most decisive conceptual event of 20th century physics has been the discovery that the world was not deterministic

and was governed by chance. But paradoxically, what this discovery led to was more and more attempts to control chance. Furthermore, with this belief also came the related practice of enumerating people and their habits: Society became statistical. A new type of law came into existence, analogous to the laws of nature, but pertaining to people; these laws were expressed in terms of probability and carried with them the connotations of normalcy and of deviations from the norm. People are deemed normal if they conform to the central tendency of such laws and pathological if they do not (I will have more to say about normalcy later in this chapter). What this means in terms of government is that since few of us want to be seen as pathological, we will conform to what we see as normal, which in turn affects what is defined as normal. So the social sciences contain a feedback effect that is not (necessarily) found in physics (Hacking, 1990, pp. 1–2).

All this is connected to what Hacking calls an avalanche of printed numbers, first seen in the 19th century with the information that states collected, counted, classified, and tabulated, a phenomenon now best figured by the U.S. census.⁵ Printed numbers, however, were the effects of the new technologies for classifying and enumerating people and things, as well as new bureaucracies with the authority and power to deploy such technologies. Hacking argues that certain facts did not exist prior to these technologies and bureaucracies; categories had to be invented into which people could be grouped in order to be counted, changing not only the ways in which we see society but also how we come to describe ourselves and others. It entails, he continues, the “making up of people” (Hacking, 1990, pp. 2–3). Unlike the 19th century, when the deployment of statistics was predominantly the province of the nation–state, today, statistics circulate in virtually every domain of culture and at all levels—from the personal to the global; indeed, statistics inextricably intertwines these two concepts (see Woodward, 2009, p. 217).

So, we have the enumeration of populations and things, as well as the belief in chance, each subtending the other. To believe in chance, one needs statistical regularities in large numbers of things; to find statistical regularities, one needs to enumerate large numbers of things; large numbers of things need to be collected because of the belief in chance. Hacking points out that originally, the collection of information by nation–states in the 19th century related to deviancy (e.g., suicide, crime, vagrancy, madness, prostitution, disease, etc.), even though today we may wish to forget this inauspicious history when we speak apologetically of information and control with regard to decision theory, operations research, risk analysis, and the other more or less specifically defined domains of statistical inference (Hacking, 1990, p. 3). Probability, by the way, did not come into

existence until the 16th century, but the history of statistical reasoning, the technorationality that subtends it, or which is subtended by it, starts in the 19th century with the enumeration of deviancy by nation–states (Hacking, 1990, pp. 6–7).

At any rate, statistical laws needed two things in order to emerge: printed numbers, which at first were collected by nation–states, and analysts, who could discover in these printed numbers laws of society akin to those of nature (Hacking, 1990, pp. 35–36). These experts soon gave us the law of large numbers, and they could tell us what conclusions to make and with what degree of confidence (Hacking, 1990, pp. 85–86).⁶

The law of large numbers could not be checked against experience, Hacking argues, and not just because there was not a mathematical basis for it, but because of superstition, laziness, equivocation, admiration for tables with numbers, dreams of social control, and propaganda for utilitarians—the proposition about stability in mass phenomena became a synthetic *a priori* truth (Hacking, 1990, p. 104). Today, the taming of chance seems irresistible; let someone propose an antistatistical idea and another will co-opt it for the “standard statistical machinery of information and control” (Hacking, 1990, p. 104).⁷

Again, it is hard to think empirically (perhaps even politically) of a society without statistics.⁸ Today, we see all kinds of platitudes and reifications about needing better statistical data on social phenomena.⁹ But statistical reasoning is not limited to large-scale societal concerns; it permeates all kinds of human activities. For example, as Emily Martin argues, so-called TQM shifts in corporations have changed dramatically the structure, organization, and meaning of work. There has been a shift from the worker qua worker, and her specific behavior in the workplace, to the system as a whole, and the system is defined as including everything—all aspects of production, interpersonal interactions, workers’ personal lives, and, well, everything. What concerns management now is calculating the range of variations, and defining the appropriate limits, upon which individual performance can be assessed and compared (Martin, 1996, pp. 145–159).

Governing individuals in modern liberal societies seems based on a belief that certainty lies entirely in what can be counted (see generally, Matelart, 2003, p. 27). And one corollary of this is that, according to Hacking and others, statistical reasoning, premised on the law of large numbers, has lost sight of the individual; there is a sense in which the individual has disappeared into a probability, as I mentioned in the last chapter (see Braman, 2006, p. 316; Hacking, 1990, p. 86). But even though the individual is not the main focus of statistical reasoning—which is geared toward the

population as a whole—the individual does not disappear at all, for at least five reasons, which I will explain in turn in this chapter. First, his fate is determined heavily by statistical reasoning. Second, the starting point for the modern forms of governing the individual is his freedom, a freedom that is defined not in axiological terms but in actuarial terms: as a risk made visible via statistical reasoning. Third, to the extent that affect is constitutive of individuality, self-government, and political intervention, certain of the individual's emotions are generated by statistical reasoning. Fourth, statistical reasoning is important to ideas about individual citizenship. And last, statistical reasoning is crucial to the creation and policing of normalcy, a concept that also subtends the logic of psychometrics.

Fatalism

As I discussed in Chapter 1, bio-politics works at the levels of the population (via statistical mechanisms) and of the individual (via disciplinary mechanisms). But when specific political interventions directed at a population are implemented because of a given probability (e.g., the rate of disease in an urban area), they are not implemented on probabilities but on actual individuals (i.e., those who live in that urban area). And so while it may be the case that the specific history of the individual disappears behind probabilities, she is very much corporeally present in the actual practices justified by those probabilities. Probabilities do not make the individual disappear; they merely mask or obscure her, which they need to do if the practices that result from them will interfere with her freedom. The way an individual's life can be dictated, altered, enhanced, diminished—indeed, extinguished—is what we mean by, following Hacking, statistical fatalism.

Hacking points out that in the 1930s, probability theory made room for free will. In other words, the analytic view held that while statistical laws may apply to a population, individual members of a population remain free to do as they please; statistical laws apply only to populations, not to individuals themselves (Hacking, 1990, pp. 116–117). Yet the disembodiment of such laws into numbers allows for all kinds of interventions in the lives (and deaths) of actual individuals without the ethical dilemmas that would ordinarily come if those individuals were specifically named. Statistics allow the governors to discover that a class of people are deemed to be at risk of this or that kind of negative result, and via probabilities, they can gauge how best to alter the behavior of that class of people. Of course, such interventions into the lives of individuals have resulted in important reforms in sanitation, disease control, and so forth, but, as Hacking argues, statistical laws do apply to actual people; the classes chosen for

intervention are not abstractions but actual social realities (Hacking, 1990, pp. 119–120). We may decry eugenics, Hacking points out, but we should not forget that it was motivated by the same altruistic spirit that motivates other more acceptable reforms directed at populations, and we cannot forget that it too is based on the statistical reasoning that governs all kinds of actions today (Hacking, 1990, pp. 120–121). Authoritarian forms of government are premised on statistical fatalism—the most egregious being those in the state of exception best figured by the concentration camp I mentioned briefly in Chapter 1.

According to Hacking, statistical fatalism is a doctrine, very much masked, that posits that when a statistical law is applied to a group of people, then the freedom of individuals in that group can be constrained. Yes, but I would say also that such logic would have it that freedom may be enhanced for some deemed worthy in some way by probabilities (e.g., whites who score well on standardized tests), though this will come at the expense of constraining it for others. For Hacking, in statistical fatalism, the issue that is hidden is not the freedom of the individual to make choices, but the power of the governor to decide what kind of person that individual will be and, I would add, what kind of future that person is allowed to imagine for herself (Hacking, 1990, p. 121). Ironically, the very freedom the individual is deemed to have is also the very basis for the statistical fatalism that will reframe it in terms of the risks that freedom poses to the population, risks that, beyond certain limits, legitimate constraining the freedom of actual individuals. Statistical reasoning thus defines, in masking it, the precariousness of the *individual*—discursive and empirical—in modern forms of government.

Risk

We have already alluded to the notion of risk in the government of individuals throughout this book, and we will continue to do so. Its use results from, and is legitimated by, statistical reasoning. Pat O'Malley argues that modern forms of government have shifted away from disciplinary mechanisms of normalization toward actuarial or insurance-based assumptions and techniques (O'Malley, 1996, p. 189). I am not sure that we have shifted too much away from disciplinary techniques, but I do think that actuarial techniques have taken on great significance, and especially for the governing of agencies, institutions, and other sites for the provision of social services. For example, the notion of the “failing school” is made thinkable by actuarial logic, such as accountability, budgetary decisions, and so on; and public support hinges on school leaders being able to speak effectively in actuarial terms (I will address the notion of accountability in Chapter 6).

Actuarial rationality invents “risk,” according to O’Malley, and it entails risk analysis. Its efficiency is seen to derive from the fact that it is subtle in its operation, thus less likely to generate resistance, which in turn requires less expenditure of political resources. It works by manipulating the environment rather than recalcitrant individuals, by acting on categories deriving from risk analysis that need not overlap those of everyday experience (thus less likely to face objections), and by acting in situations rather than by exclusion of deviant cases (thus less need for coercion). In a significant sense, actuarial rationality appears meliorative rather than coercive, statistical and technical rather than moral, tolerant to individual variation rather than rigidly normalizing, and covert rather than overt (O’Malley, 1996, pp. 190–191).

It is in the sense of allowing individuals their variations, allowing individuals their freedom, that statistical reasoning’s notion of risk does not efface the individual—it adapts itself to him. Individuals are deemed empirical realities with capacities to act, and statistical reasoning offers them risk analyses so that they understand and freely choose to conform to the appropriate limits of their freedom. According to O’Malley, individuals are expected to deploy the knowledge of risks in order to minimize their risks. Individuals are deemed responsible for being knowledgeable and rational. To have the State or others take care of them comes to appear as weak and culpable.¹⁰ Actuarial rationality encourages prudence (O’Malley, 1996, pp. 202–203).

Let us tease this rationality out with an example. Lars Thorup Larsen argues that in the 1970s, there arose from the sociomedical field the “lifestyle concept,” which became synonymous with individual risk factors, such as smoking, drinking, indulgence, and a sedentary way of life. During this period, the meaning of the term “lifestyle” was transformed from its connotations with holistic and social bases into certain forms of irresponsible individual behavior. The idea was that the population’s health had to come from the healthy choices of individuals. The focus on individual choice, however, was clearly tied to a statistical view of the population’s health. There is a general belief that individuals will be able to bring about improvements in the nation’s health if given the right information (Larsen, 2011, pp. 206–208). The point here is that such attempts at controlling individual behavior for the sake of the population took the form of statistical calculations of risk and the prudence they were directed at creating.

As an aside, in the United States, the strong support for, and also opposition to, the Patient Protection and Affordable Care Act of 2010, otherwise known (positively or derisively, depending on one’s political affiliation) as “Obamacare” appear both to support and reject the logic of prudence in

the notion of risk. The law is premised on the notion that getting health care is a prudent thing to do, not just for the individual but for society as a whole, and the fact that it functions as a quasi-public and -private, market-based system (as opposed to a single-payer system or the almost-pure market-based system that existed before), and the fact that there is a fine for individuals who are able, but refuse, to get health care, is a logic that assumes that individuals have the ability to choose, and the failure to do so is evidence of a lack of prudence. The State intervenes mainly only to the extent that in some cases the individual cannot freely choose (such as when he has a preexisting condition or is too poor to pay for health care in the marketplace) or when he refuses to choose. The law, however, no matter how one looks at it, will require state interference in the individual's choices—and in some cases the State will force him to choose, thus not trusting him to be prudent, and resorting to coercion to ensure that the individual takes care of himself. So in this sense, the law rejects the notion of freedom in the case of health care, as the opponents often claim.

At any rate, the governmental logic of risk presupposes freedom and expects prudence. It is thus individualistic at first glance, but perhaps not entirely, for despite the use of individual choice and autonomy in its logic, it must presuppose that individuals are actually very much social beings, who will not want to be seen in the eyes of their peers as imprudent. The notion of risk, therefore, seems to work on a particular “social” emotion—shame, pride, or something akin to that—and thus it makes use of affect, a point I turn to next.

Affect

Kathleen Woodward reviews various autobiographies and other personal narratives in order to determine to what extent narratives of pain, anger, and so on offer clues to emerging shifts in social and cultural formations. In co-opting an idea first introduced by Raymond Williams, Woodward analyzes the “structure of feelings” associated with changes in the culture of postmodernity: an increasing sympathy for nonhuman cyborgs, bureaucratic rage, and statistical panic. I focus here on the last of these feelings: the panic, she argues, that many of us feel at the pronouncement of certain statistics, an effect of what she calls the “omnipresent deployment of statistics” in a society like ours (Woodward, 2009, pp. 7–8; see also Williams, 1977, pp. 132–135). The logic undergirding her kind of analysis is that social structures generate forms or sites of feelings, and emerging sociocultural changes generate new feelings and emotions, and thus our feelings are more than simply psychological phenomena; they allow us to register

these social changes (see Woodward, 2009, p. 135). Thus, in the so-called informational age, we want to attend to the forms of feelings that proliferate in mass media, for they tell us much about social structures and about how feelings and emotions are deployed in, and generated by, governmental rationalities.

Woodward's argument about statistical panic is particularly instructive, and I think that a quick summary here of her point will easily register to us in an affective way, illustrating how feelings work in government. She argues that statistical panic is a characteristic of the "society of the statistic," one underwritten by the sense of omnipresent risk. This society is one in which statistical probabilities—about global warming, avian flu, terrible weather storms, children's weight, sexual risks, financial collapse, failing schools, etc.—bombard our everyday life. Of course, the 9/11s of the world, and the states of exception they justify, add to the sense of risk in a corporeal way. The society of the statistic, Woodward continues, is a world increasingly characterized by a pervasive sense of precariousness, insecurity, uncertainty, and unsafety. The feelings characterized by the statistical society are panic at one extreme and boredom at the other (Woodward, 2009, pp. 14–15). With regard to information, we can also feel "information overload," "information anxiety," and "information fatigue" (Gleick, 2011, p. 403; although Gleick does not address affect or emotions directly in his book. In Chapter 6, I will refer to "accreditation fatigue."). The point here, again, is that feelings are registers of sociocultural structures, and we are remiss if we relegate them simply to the area of psychology, which, of course, traffics in feelings and emotions of all kinds and which also illustrates something culturally significant about the ways we institutionalize feelings and its experts.¹¹

Again, despite the fact that statistics ostensibly are concerned with populations and offer only probabilities, they work on individuals in very important and insidious ways—and indeed, statistical reasoning as a form of government counts on this. We see ourselves in these statistics—they seem to speak to us directly. Woodward correctly argues that when we feel that our future, health, or finances, or those of our loved ones, are at stake, statistical panic can strike with compelling force (Woodward, 2009, p. 196). We are likely to modify our behavior accordingly in order to eliminate the risk that we imagine the story of the statistic is telling us: that we will be in harm's way if we do not change our behavior or stay the course, depending on which side the greatest amount of risk is deemed to be.

Statistical reasoning thus causes and relies upon uncertainty in a very practical way, which is somewhat paradoxical since its inherent logic is premised on the "fact" of uncertainty and the desideratum of taming chance.

But at any rate, it causes uncertainty as a concept in the analysis of society, as a practical matter in the ways probabilities of risk are made technical, and as a psychic experience for the individual in terms of affect. What causes us panic is that we can never be certain about risks, no matter how they have been quantified in aggregate numbers (Woodward, 2009, pp. 198–199). Statistics that forecast the future engender an insecurity that, like a low-grade fever, Woodward points out, permits us to go about our everyday lives in a state of statistical stress (Woodward, 2009, p. 211).

If the informational society is “true,” in an empirical, discursive, or governmental sense, we may not be able to imagine a world not saturated by statistics as a discourse of knowledge, ranging from the trivial to the life threatening. We cannot get away from statistics, and perhaps we may not want to do so either. Numbers allow us to speak with a very powerful kind of authority in modern liberal societies, especially in the political arena. Indeed, there are creative (and democratic) uses of statistics (the pro-immigration, profinance, and prohealthcare reform movements are good examples). So perhaps our main task in the processes of self-government is, to borrow from Woodward, to refuse to succumb to the unreflective storytelling in statistics (see Woodward, 2009, pp. 215–217). Woodward is worth quoting here:

The structure of feeling called statistical panic (and its oscillating partner, boredom or numbness) is an effect of the social technology of statistics, one that has both contributed to the creation of the omnipresent discourse of risk and produced a calculus to avoid that very risk, a prime contradiction of capitalistic culture in the 21st century. Like other feelings, then, panic has a history. Statistics are not a discourse of awe or wonder but rather the stuff of everyday life. They are a routine currency in which we plot our lives in terms of a calculus of risk and in which, when we are jolted into mortal attention, we find ourselves living on the razor edge of panic, beset by the thundercloud of statistics. (Woodward, 2009, pp. 217–218)

Woodward suggests that we can survive the statistical society by understanding our every day as not only requiring that we deal with actual threats but also with an “invisible atmosphere” that “radiates risk and projects it far into the future.” We survive in this society by dissecting the deployment of statistics, and its effects, and by reflecting on our affective responses to the discourse of risk (Woodward, 2009, pp. 199–200).

I should admit that my analysis so far in this book has probably also conjured up a structure of feeling—the disillusionment of the leftist critic, perhaps. And my discussions of the exception, fatalism, risk, and affect, in particular, may generate a kind of panic for people who may not have thought

of this in the ways I do. But the structure of feelings relating to statistical reasoning does not always engender feelings we would rather not have. Because of statistical reasoning, we also feel like good citizens, that is, when we do what we imagine the statistic is telling us to do (e.g., when we get health care, when we save for our future, when we buy security alarms, when we vote in elections, and so on). We should therefore reflect on what it means to be a citizen, since I will argue that too is an effect of statistical reasoning.

Citizenship

Because of statistics, we can now imagine “making up people” in a governmental way. The classification of individuals into categories allows us to understand this phenomenon from the top-down and from the down-top, that is, how people are classified into categories by authorities and how people come to act as a result of those categories. Hacking refers to the “making up” of “people with multiple personalities” and of “homosexuals,” two classifications that did not exist until the social sciences created “those people.” We can ask, similarly, when and how, for example, were the “gifted,” “the ADHD,” the “intelligent,” the “at risk,” the “high achiever,” and for that matter, the “leader,” the “teacher,” or “citizen,” made? Hacking proposes that in thinking about “making up people,” we can look to the processes of labeling, pressing “from above” by authorities who create a “reality” that people make their own, as well as to the autonomous behavior of the labeled persons, which presses “from below,” creating a reality those authorities must face (Hacking, 1986, p. 234). It is in this way that we can now look at how the “citizen” became an invention of a particular kind of liberal governmentality.

Thomas Popkewitz argues that the Enlightenment’s notion of cosmopolitanism invented an urbane individual who used reason and science for the promotion of the universal values of progress and humanity. Cosmopolitanism was thus a political strategy of liberal modes of government, one which not only invented a free and rational citizen as proper to its modalities of social control, but also one that provided the limits on government—it would interfere only in cases in which the citizen did not act like, well, such a citizen was supposed to act (Popkewitz, 2004, p. 189). This citizen would not see himself as submitting to the will of the State but as conforming to a rationally managed individuality whose agency secured progress and social ends (Popkewitz, 2004, p. 200). The social sciences invented and policed this cosmopolitan rationality via statistical studies (but not just those, as other kinds of studies were used as well, such as the case study in psychology) in urban planning, domestic and familial relations, educa-

tion, social psychology, child development, and myriad other fields of study. These scientific studies provided calculations that were descriptive of the actors and the social spaces in the nation, and they established rules and standards for appropriate action and citizenship (Popkewitz, 2004, p. 201).

As Rose points out, this liberal mode of governing via notions of citizenship assigns a key role to experts—statisticians, to be sure, but also other kinds of social scientists, as well as social reformers, philanthropists, educators, social workers, and a slew of others. Today we have the self-help industry working via similar kinds of logic, specifying the ways of being a normal citizen. The individual conforms to these standards not because she is compelled to do so by religious or public authorities, but because they are rational and true. The notion of normality, the invention of the norm, is the linchpin of this mechanism, which came to signify not only what was usual but also what was desirable, as we will discuss in greater detail in the next section. The ambiguity between what is average and what is desirable, between that which merely is and that which should be, is written into the little word “normal” (Rose, 1999, pp. 74–75).

The issue here in the word “normal” is much more than semantics; statisticians make the notion of the term “normal” technical; that is, they calculate what it means for populations and then use such calculations to individualize individuals by comparing them to the population as a whole (Rose, 1999, p. 75). This statistical calculation ostensibly orients reality, not to “what should be” but to “what is” empirically, which is to say, by the statistical distribution of frequencies, such as rates of diseases, births, deaths, and so forth. Such frequencies are taken as benchmarks for optimal interventions, but unlike disciplinary technologies, they do not draw boundaries between what is permitted and what is forbidden; instead they specify optimality within a range of variations (see Bröckling et al., 2011, pp. 4–5). This is an effective form of government, for creating optimality turns “what is” into “what should be.” And what makes it work is that it requires very little coercion, especially because of the way it works in terms of affect, as we discussed earlier, which does not register to us as coming “from above” but “from within”—after all, a feeling seems to us to be the most personal of things. To be a free citizen in modern liberal government, following Rose, means attaching oneself to a polity where certain civilized modes of conducting our existence are identified as normal, all the while binding ourselves to those experts who define what is normal and help us adjust our lives accordingly (Rose, 1999, p. 76).

The school is a key governmental institution in all this, of course. In the United States, as well as in most economically advanced nations, schooling is compulsory, and so the school is given imprimatur to normalize at an

early age. This argument has become too obvious to say much more about it here, but here we can reread, then, the way curricular activities work in the formation of citizenship. Mathematics education—indeed, all of STEM in the United States—for all the reifications in the discourse on economic competition that appear to justify policies for the privileging of such mathematics in schooling, works as a form of government. Mathematics, or other discourses privileging numeracy, disciplines the child's mind, thus playing a crucial part in the formation of rational citizenship, which is so because it is defined as having foresight and a calculative relation to life (Rose, 1999, p. 77). The same logic is at play in the avalanche of statistics about every aspect of our lives. In taking in these statistics, in internalizing them, that is, we deem ourselves rational citizens, using numeracy to calculate risks, and to adjust ourselves to those risks as best we can, and when we cannot, we blame ourselves.

Statistical reasoning is therefore the crucial technology in the investigation, classification, and normalization of individuals who, in the interest of order, have come to see themselves as civilized. Statistics, originally starting out to control deviancy, soon became the key to a new strategy: the invention of society, which in liberal thought is often deployed as an opposition to the State. Society, much like the population in bio-politics, was deemed governed by laws intrinsic to it. Sociologists were the experts necessary for understanding these laws. And so social questions became sociological ones. As Rose points out, on the basis of such sociological knowledge, the dynamics of society could be governed. Sociologists and other social scientists would stake their claim as experts of society, uniquely able to speak and act in its name. We can now see the emergence of social engineers (Rose, 1999, pp. 115–116). Much like making up people, we now make up societies, and in this way, the “social” becomes its own politics with specific interests, one with claims that can be directed at, and against, the State, or the market, or the individual, or whatever (Rose, 1999, p. 117). These claims are made, however, in the name of a collectivity, one that is often opposed to even that of the individual.

The notion of citizenship now is characterized by the interplay, the conflict even, between the idea of the individual and that of the social, and responsible citizenship can mean privileging one over the other, as the situation may require and as necessary to achieve particular ends. This interplay, this conflict, probably manifests itself more problematically in liberal nations other than the United States. In the United States, the notions of the individual and the social are not rigidly defined as oppositional, especially, as Rose argued, in the progressive discourses of William James, George Herbert Mead, and, I would say, John Dewey, who argued that ethical conduct

has its origins in social groupings, and thus the rules of proper behavior arise from this social space. In these social groupings, social control is internalized and becomes a form of self-control (see Rose, 1999, p. 121). At any rate, in the United States, in particular, self-control is thus a way of defining individuality within a social space, and the role of experts in understanding how one can control oneself thus gains significance.

Experts flourish in liberal forms of government, offering individuals practical knowledge for behaving as proper citizens, and in this way, experts ally themselves with political authorities, while, Rose indicates, being insulated from much of political control—a belief in expert autonomy, by the way, that I will question in Chapter 6. At any rate, experts focus on political authorities' problems, problematizing new issues for them, and translating political concerns about economic productivity, social unrest, law and order, normality and pathology, and so on, into the vocabulary (and statistical reasoning) of management, accounting, medicine, social science, and psychology, among others. These experts also ally themselves with individuals, informing them not only directly through professional services but indirectly through mass media, hovering around them during particularly risky situations (e.g., childbirth, illness, schooling, unemployment, etc.), translating their daily worries and decisions over everything into a discourse claiming the authority of truth, and offering to teach them the techniques by which they might manage their lives better (Rose, 1999, pp. 132–133).

We may now be experiencing a change in the use of the notion of the social or of society as a way of governing individuals. We are seeing the proliferation of discourses on “community,” which are akin to, but different from, those of society. These discourses pop up especially when there is a sense (invention?) of social fragmentation of one kind or another (e.g., the multiculturalism movements, as well as the rights of specific communities, such as the LGBT communities, religious communities, etc.). My theory is that the notion of society, itself arising from that of the population, seems to have been broken up, reduced, that is, into smaller categories, called “communities,” ones ostensibly tied to other, more “natural,” things like sexuality, ethnicity, specific religious beliefs, and so on. Rose argues that the notion of community arose out of attempts to avoid the categories of political theory (e.g., the State, political left and right, etc.) and of neoclassical economics (e.g., *Homo economicus*, self-interest, etc.), and that it revives civic republicanism that posits responsible citizenship as participating in civic affairs but guided by common virtues and commitments to the common good (Rose, 1999, pp. 167–169).¹²

Perhaps. What seems more convincing to me is Rose's implication that the notion of community works in the service of neoliberal forms of gov-

ernment seeking to restructure social welfare delivery, shifting it from the State to the community, infusing it with notions of volunteerism, charity, and self-care, which, of course, generates a cadre of unpaid persons who will take on the delivery of social services as a moral imperative (Rose, 1999, p. 170).¹³ “Community” thus reinvents governmentality, creating spaces of emotional relationships through which individual identities are constructed by their bonds to microcultures of values and meanings (Rose, 1999, p. 172). Viewed from the perspective of affect, we can see here another structure of feelings, for it works on certain kinds of attachments we have for small groupings. Subjectification via notions of community needs certain discourses to legitimize itself. It needs, for example, the language of religion, ethics, spirituality, or similar kinds of logic tying individuals to moral stances; it needs the language of psychology to explain their identifications to particular communities; it needs the language of economics and statistical reasoning to calculate risks; it needs the language of education to socialize us to community standards; it needs the language of marketing to tell us what we want; it needs the language of mass media to tie us to certain spaces and logics; and so forth (Rose, 1999, p. 176). Thus, as with society, we now give authority to a range of community experts and professionals.

I am with Rose in saying that such notions of community, to the extent they make central the ethical stakes in government, can offer contestation to the apparently objective technorationality that governs our lives, which tends to convert ethical stakes into calculations of risk. This contestation is good, but we must always be careful of the ways ethical language can be co-opted into social discipline, which is the logic of technorationality, coming to be seen as natural and uncontestable and opening up opportunities for governmental rationalities that have no limits (Rose, 1999, p. 192).

The notions of citizenship, society, and community are all bound up in the logic of statistical reasoning. Indeed, Rose indicates that even democracy itself is bound up in statistics. He argues that democratic power is calculated power, since numbers are crucial to the justifications that give legitimacy to political power (e.g., the number of citizens who will vote for a representative who asserts she will do something; the number of people who believe that a political action is favorable to them, etc.). Democratic power also requires calculating what citizens think and do. And democratic power requires calculating citizens who will use the deployed statistics to calculate the risks posed by their freedom and choices (Rose, 1999, pp. 200–201). In other words, following Rose, numbers problematize issues and make them amenable to government; numbers also allow citizens to evaluate governmental action and to measure success or failure in terms of quantitative changes; and numbers give legitimacy to authorities, since they

lend credence to their claims of being representative in enacting the will of the majority, and so on (Rose, 1999, p. 221).

The discourses on citizenship entail assertions on behalf of responsible citizenship, on society, on community. They present themselves, following Rose, both as diagnosis and as cure, and they are therefore hard to evaluate. They purport to describe certain social ills, diagnose their causes, and offer themselves as solutions (Rose, 1999, p. 173). But these discourses do not become governmental until they are made technical, when their logics are put into practice, when they create zones for investigating, mapping, classifying, and otherwise making intelligible the conduct of individuals. And to the extent they rely on statistical reasoning, they enact an insidious form of control whose effects can be registered at the level of our bodies, our psyches, and our feelings.

Normalcy

I have referred to the notion of the normal throughout this chapter, and so I think now is a good time to take on that notion directly.

[The] normal stands indifferently for what is typical, the unenthusiastic objective average, but it is also what stands for what has been, good health, and for what shall be, our chosen identity. That is why the benign and sterile-sounding word “normal” has become one of the powerful ideological tools of the twentieth century. (Hacking, 1990, p. 169)

This quote comes from Hacking, who, the reader has likely surmised, plays a prominent part in the story I tell in this entire chapter. The idea of the normal was originally limited to the medical domain, and it came with its opposite, the pathological. But now it has moved into the sphere of everything: people, behavior, states of affair, molecules—everything could be normal or abnormal.

These pair of ideas, the normal and the pathological (or abnormal), emerged in the medical field when, as Georges Canguilhem argued, disease was no longer viewed in terms of the anguish it causes the individual but became an object of study for the researcher. Indeed, the study of pathology came to be seen as offering us knowledge of the normal state. It was in the 19th century that ideas about the normal and the pathological became parts of scientific dogma, and their extension into other realms of study seemed dictated by the authority that biologists and physicians gave to these ideas (Canguilhem, 1991, p. 43). Their logic that disease and health were simply quantitative (versus qualitative) variations of each other became that of any

science and for the study of collectives as much as individuals (Canguilhem, 1991, p. 49). From this idea came the notion of the normal distribution made visible to us in the figure of the bell curve. This notion, according to Rose, could be represented in a simple visual form once it was assumed that all qualities in the population varied according to a regular and predictable pattern. The characteristics of this pattern were those established by the statistical law of large numbers (Rose, 1989, p. 141).

Hacking argues that it was Adolphe Quetelet who took the idea of the normal distribution from the study of biological phenomena to that of social phenomena. He started out in the 1830s with the idea of the “average man,” which was not a real man—it was shorthand for a statistical average. Yet Quetelet was referring to racial characteristics in a population, and so the “average man” came to represent the typical characteristics of a race, which, of course, then led to the introduction of social policies that would either preserve or alter this average (i.e., eugenics). And moreover, he translated a mathematical operation into a real quality. That is, his measurement of physical qualities in individuals became a way of measuring properties in a population, thus turning frequencies into real qualities and leading to the belief that statistical laws were actually laws of society, which, of course, were also deemed those of nature. The point of studying society was to uncover underlying truths and causes; otherwise, why study it at all? (Hacking, 1990, pp. 107–109).

Of course, as Canguilhem points out, to define as pathological what is deemed too much or too little in the way of variation is to assume the normative character of the so-called normal state, which means that the normal state is no longer that which is merely explained but that which manifests an attachment to some value (Canguilhem, 1991, pp. 56–57). This notion that pathology is a quantitative variation of that which is the so-called normal state not only masks the underlying value judgments of that which is considered normal, but it also reduces all phenomena to a common measure of analysis—the normal distribution. Everything can be measured this way, no matter how disparate are the things that are being put into such a measure. Thus, Hacking seems correct that the idea of the normal has become indispensable because it gives claims about human beings an aura of objectivity. The need to tame chance also invented the idea of normalcy, thus we no longer seek to understand human nature but only what is normal (Hacking, 1990, pp. 160–161). And what is magical about the word “normal,” Hacking continues, is that we can say two (I would add, not entirely compatible) things at once: With “normal,” we say how things are and also how they ought to be (Hacking, 1990, p. 163). The term “normal” (and its corollary terms, such as the “norm,” “standard,” etc.) is thus

ambiguous, since it designates at once a “fact” and a value attributed to that “fact” (Canguilhem, 1991, p. 125).

From the idea of the normal, we get that of the norm, which also connotes two things: one empirical or statistical (i.e., what is usual or typical) and the other ethical (e.g., how we should behave in a given context). Statistically speaking, the norm is average, and all variation is characterized in a quantitative relation to it (Hacking, 1990, pp. 164–165). When the concept of the norm moved from the medical into the political and social spheres, the normal became what we *ought* to attain in order to promote social progress. So positivists have now constituted the normal state of everything—the normal as statistical average and the normal as social progress (Hacking, 1990, p. 168).

Hacking points to two historical stances toward the idea of the normal with regard to social progress. First there was Émile Durkheim, the “father” of sociology, who approached the idea from a conservative viewpoint, and thus the idea of the normal was a way of maintaining the status quo. He was committed more strictly to the medical origins of the idea and deemed deviation from the norm a pathology. Indeed, the normal for him was something from which society had fallen and to which it should be restored. Then there was Sir Francis Galton, a key figure in eugenics, who saw the normal as only average, as something to be improved upon. He saw excellence at one extreme of the normal distribution, and thus he believed that we should improve upon averages. When his logic related to human beings, it became eugenics (Hacking, 1990, pp. 168–169). Galton’s stance appears now to have come out victorious, especially when one thinks of our current uses of IQ and other standardized tests, notions of merit, and individual, institutional, and (inter)national rankings of all kinds. Such ranking mechanisms suggest to us that some people or things are better than others.

With regard to social phenomena (perhaps also with regard to biological ones), the traits revealed by averages, following Canguilhem, depend on fidelity to certain (ethical/social) norms, something that attention to statistical frequencies often masks. A social trait is not normal because it is frequent; it is frequent because it is normal, or rather, normative, in a given situation (Canguilhem, 1991, p. 160). People act in accordance with what they are convinced is normal. The notion of the normal, therefore, is a polemical concept. Unlike a law of nature, supposedly, a norm deals only with possibilities, which, by definition, leaves open the possibility of something else. But I would argue as well, that when that norm is established by science, it implicitly, following Canguilhem, comes with an aversion for its opposite; that which is different is not merely different, in an indifferent kind

of way, but repulsive, perhaps even abject. To establish a norm in a scientific manner *is* to normalize (see Canguilhem, 1991, pp. 239–241).

With regard to liberal forms of government, we can see that social administration must establish these norms, for they allow us to police ourselves without state action. The norms in the notion of the “average man” set the standards for the political management of populations (see Matelart, 2003, p. 27). But these standards or norms in liberal forms of government cannot look like they are forms of political coercion; they must appear in the form of ideas of the normal, a state we want to achieve, and of the pathological, a state we want to avoid. And so statistical reasoning again works its magic in these processes of government. As I have suggested already, statistical reasoning is not simply an epistemological concern; it is a technological one, for it makes people calculable and amenable to administration.

I will thus co-opt Theodor Adorno’s quote that administration “which wishes to do its part must renounce itself; it needs the ignominious figure of the expert” (Adorno, 1991, p. 129). Social administration must work through, as I have discussed throughout this book, the expert—scientific and otherwise—who can tell us how we should behave. Liberal forms of government place limits on the direct intervention into the lives of individuals by the State, and so experts provide the bridge between formal political government and the activities of its citizens; experts work by the persuasive authority of their truths and the anxieties (panics?) their norms generate (Rose, 1989, p. 10). The idea of the normal serves the imperatives of “governing at a distance,” in which the attempts by individuals to manage their lives are linked to the political imperatives of capitalism, efficiency, social order, or whatever imperatives may be prominent at any given historical moment (Rose, 1989, pp. 10–11).

The field in which the idea of the normal works the most intensely and efficiently is that of the child, which has become—or perhaps it always was—a key aspiration of authorities. There are, of course, historical children, but we speak here of the “child,” not as a natural phenomenon with natural laws guiding its natural development, but of a political space for the production of categories, distinctions, techniques, and rationalities (see B. Baker, 1998, p. 138; see also Hultqvist, & Dahlberg, 2001, pp. 4–6). This “space”—the child as a field of politics—has been the locus of innumerable projects that purport to safeguard it from physical and moral dangers, to ensure its normal development, to promote actively certain capacities or attributes such as intelligence, educability, and emotional stability (Rose, 1989, p. 123). All government entails assumptions about that which is to be governed, and in the case of the child, such assumptions include the idea

that it has a nature, or that it develops in accordance with particular patterns, or that it needs guidance until it matures into adulthood, or . . . whatever (see generally, Hultqvist, 2004, p. 155).

Normality with regard to the field of the child will come in three guises, according to Rose: (a) as that which is natural and hence healthy; (b) as that against which the actual is judged and found unhealthy; and (c) as that which is to be produced by rationalized social programs. The criteria for these guises of normality are established by experts who claim scientific bases for their knowledge of children (particularly the experts from the various psychological fields), a knowledge, by the way, which did not originate from the study of so-called normal children but from those considered pathological—the troublesome, the recalcitrant, the delinquent, and, I would add that today, it would include the at-risk, the ESL, the disabled, the abused, etc.—that is, any child who worries authorities of various kinds (Rose, 1989, p. 133). We should reject the belief that studies of the normal, norms, standards, and the like, with regard to children tell us significant things about the objects of these studies—the historical children being studied or acted upon because of such studies—and instead consider that these studies are telling us significant things about who has expertise over given issues, what kinds of knowledge are given the imprimatur of truth, which practices and forms of expertise are legitimated, and which are being displaced in favor of new ones.

The psychological sciences are particularly important to the kind of governing via norms that statistical reasoning engenders and justifies in the field of the child. As Rose indicates, the importance of these sciences is not simply related to the ways they have utilized the human psyche as a domain for systematic government in the pursuit of sociopolitical ends (i.e., to educate, cure, reform, punish, etc.), but also because they have given us powerful inscription methods, such as the examination (e.g., IQ test, psychological assessments, case studies), which combine discipline through surveillance and normalization through techniques of inscription (i.e., documentation) to produce calculable traces of individuality (Rose, 1989, p. 7). The most powerful exams are those created with psychometrics, an argument with which I conclude this chapter.

Psychometrics

One of my favorite books about psychometrics (albeit indirectly) is Michael Young's satire, *The Rise of the Meritocracy* (1961). Young set his satire in Britain in the year 2033 and described what happens when a meritocracy upends the previous hereditary system of allocating social and political resources

and instead allocates rewards on the basis of a formula: Merit = IQ + effort. Despite overturning a previously despotic system, the meritocracy has negative consequences on people's lives and on democracy, resulting in a mass revolt that led to the death of the narrator himself. This satire can offer a point of departure for discussing various issues relating to schooling, merit, and so on, and I have resorted to it in various arguments about such things.¹⁴ Here, in line with idea of statistical reasoning as a form of government, I want to focus on the point Young makes about psychometrics, the so-called science behind IQ and other standardized testing.

I do not believe anyone will object to the argument that standardized (and "high stakes") testing is becoming the norm in schooling worldwide and that the results of such tests have come to define the worth we attach to individuals, especially to the extent that these tests purport to signify something meaningful about individual ability, learning, and achievement. But these tests do more than simply tell us about the worth of individuals; they also tell us something about the quality of parental involvement, of the overall school or school system, of neighborhoods, of individual states and provinces, and even of nations themselves. Their magic, following Michel Foucault, is that tests open up two correlative possibilities:

Firstly, the constitution of the individual as a describable, analyzable object, not in order to reduce him to "specific" features . . . but in order to maintain him in his individual features, in his particular evolution, in his own aptitudes or abilities, under the gaze of a permanent corpus of knowledge; and, secondly, the constitution of a comparative system that made possible the measurement of overall phenomena, the description of groups, the characterization of collective facts, the calculation of the gaps between individuals, their distribution in a given population. (Foucault, 1977, p. 190)

We tend to focus our attention when we are inclined to contest the hegemony of testing on the tests themselves or their political effects on particular children, or perhaps all of them, or on schools, or on life, or on whatever else. But we tend not to spend much time on the logic of the knowledge subtending such tests, and rarely at all on the experts who create them and deploy them in various social settings. What role does this psychometrics and its experts play in government? That is my concern here.

According to Rose, the most important project of the psychological sciences was the IQ test. Such a test, he argues, allows for the visualization, discipline, and inscription of differences that did not rely upon the surface of the body as the diagnostic intermediary between conduct and the psyche. Originating from the figure of the "feeble child," who was deemed

a social threat, especially by eugenicists concerned with the degeneracy of the race, the IQ test arose out of the need to make invisible differences legible. The statistical idea of the normal distribution permitted the mathematization of difference. The intellectual capacity of every individual could be determined in terms of where she was along the normal distribution. What started out as a test for Alfred Binet to determine which children would be sent to special schools because of their “feeble-mindedness” soon became a test creating a hierarchy of all individuals. But psychometrics could not have achieved this powerful role without the governmental requirements of schooling and of the child as a field of politics, as I have suggested already (Rose, 1989, pp. 139–143).

Young’s argument that the creators of intelligence-based tests are “scientists [who] have inherited the earth” seems to ring true (Young, 1961, p. 107). We have allowed psychometricians to become arbiters of our fates; they will decide whether we get into a good college, get a scholarship, attain a good job, and so on (see generally, Lemann, 1999, p. 345). Indeed, given the role experts play in liberal forms of government, they will decide how we come to think of ourselves, what we will desire, and how we will assess others. Pierre Bourdieu argues that scientists in general are social engineers who give their knowledge to governing elites so that the latter can rationalize their domination (Bourdieu, 1993, p. 13). I will not follow this logic to the extent that it establishes too linear and unidirectional a notion of domination. As I have discussed previously, liberal forms of government do not necessarily function with a motive of domination in mind.

But I will agree that science is imperative to government, and psychometrics works very much like other sciences in that it offers a rationalization that works in government precisely because (a) it does not come from political authorities, despite the fact that such authorities make great use of this knowledge; (b) it does not take the form of coercion, despite its very negative effects, (c) it is a significant aspect of bio-politics, giving us knowledge about individuals who see themselves in test results and subject themselves to experts because of them (e.g., test preparation experts, teachers, psychologists, etc.), and about populations, which will become subject to intervention to correct their patterns (e.g., reforms intended to improve “education”); and (d) it works without making visible its own historical possibility or the political agendas of its experts. Psychometrics, supported by a logic of technorationality, statistical reasoning, bio-politics, risk, and the normal, purports to uncover innate individual and social phenomena, but in fact it is a technology for government, a technology for establishing social order efficiently, a technology for disciplining the body, and a technology for legitimizing governors, who give themselves the authority to dictate

what is normal and pathological in a society. Psychometrics does not direct itself to individual subjectivity for its sake but for governing “at a distance.”

For psychometrics and its experts to play this role in government, there had to be radical changes in what counts as knowledge (for a more extensive elaboration of these ideas, see Baez & Boyles, 2009, pp. 146–153). As I have been discussing throughout this chapter, society had to become statistical, and with it came the enumeration of people and the idea of normalcy. Psychometrics allows us numerous classifications of people, all defined in relation to a norm, a norm which, as we have discussed, is also a covered-over value: the “gifted,” the “intelligent,” the “high achiever,” “at-risk,” the “unmotivated,” “the bipolar,” “the sexual predator,” and so forth, all of which, once created, present psychometricians with messy realities that they must continuously attempt to ensnare within their classifications. Psychometrics standardizes complex social judgments about individuals and groups, and notes these judgments in devices that mask their political motivations by reframing them in terms of mathematics and statistics. Its logic is continuously to find ways to differentiate individuals in a brief time span, in a manageable space, and at the will of the expert.

Because of this powerful form of statistical reasoning, what we see as “individuality” or “uniqueness,” at individual and group levels, is actually various sets of statistically defined norms, quotients, scores, and profiles (Rose, 1989, p. 143). Psychometrics makes the individual knowable, calculable, and administrable, placing her within an aggregation and obscuring her behind a probability, or singling her out and differentiating her from specific others (or maybe from all others) and evaluating her in relation to them. The classifications and categories that come from psychometrics lead to myriad practices that govern people in particular ways (e.g., high-stakes testing in schools), to fix them when the variation is such that it is deemed an abnormality, and in some cases, to institutionalize, imprison, punish, or even eliminate the incurable ones. The rights to freedom for the incurable ones must be constrained for the good of the order. Statistical fatalism and the specter of the exception are thus figured in psychometrics most frighteningly yet invisibly.

Notes

1. Of course, it is also true that this is constantly being contested. Conservatives, especially in the United States, often make claims with what is clearly a non-scientific and nonempirical understanding of issues (their arguments against climate change or that the world is no more than 5,000 years old are cases in point). See generally, Cooley, 2013, pp. 350–351. As for me, I wish I could be partial to such conservative claims, which in a sense offer a contestation of

the predominance of technorationality, but unfortunately, in a greater sense, these conservative claims are not about technorationality at all, but about establishing a (and only a) conservative view (and just one of those, even) of the world as truth. Besides, my own concern with technorationality is not that I am opposed to science, but that I find troubling its creeping into all kinds of decision making, displacing—perhaps even foreclosing—other, more moral, views of how we might govern our lives. For readers interested in a more extensive elaboration of my argument in this regard, see Baez and Boyles, 2009.

2. Richwine has come under scrutiny for his anti-immigrant rants on the Internet, as well as for his dissertation at Harvard University that used numbers to justify what seemed to be a xenophobic stance toward immigrants.
3. A good example of this is the recent healthcare reform in the U.S. The logic of the assessment of the reform entails signing millions of “healthy” Americans—if only “a few” sign up, the reform fails because its costs exceed its benefits, benefits defined in numbers. Of course, such millions could include just the poor Americans who will now benefit from Medicaid expansion, but *those* numbers do not seem to count as much, if at all, for opponents of the reform.
4. Probability theory became one of the greatest successes of the 20th century, but its foundations were laid down by Blaise Pascal and Christiaan Huygens in the 1600s. It offered a new means of objectifying human society by positing a method for choice in the event of uncertainty. See Mattelart, 2003, p. 12.
5. The notion of statistics was first defined by Gottfried Achenwall as the “state science” or “Staatswissenschaft,” aimed at “illustrating the excellencies and deficiencies of a country and revealing the strengths and weaknesses of a State” (as quoted in Mattelart, 2003, p. 13).
6. It was Siméon Denis Poisson who gave us the law of large numbers, which still appears in every probability treatise (Hacking, 1990, p. 95).
7. Hacking points out a number of historical challenges to the taming of chance since the middle of the 19th century. There were challenges to the actions of social reformers, who relied on statistics for their reforms; some were concerned that reformers, in the name of reform, become indifferent to people. There were also those who questioned the assumptions of probability theory, particularly physiologists, who rejected probability when dealing with individual cases of diseases. Another group included staunch believers in pure chance, who felt that we should leave nature as it is. See Hacking, 1990, pp. 142–147.
8. Indeed, social demography, perhaps more than any other social science, has its roots in the state statistics described by Hacking. This form of inquiry is highly committed to positivism and to precise measurement via statistics, either using existing databases of administrative states or collecting large data in many countries. See Zald, 1995, pp. 470–471.
9. For example, we are told that current state statistics are not keeping up with the rapidly changing and increasingly complex economic and political phenomena worldwide. See Jeskanen-Sundström, 2003, p. 5.
10. This logic subtends the comments made by presidential candidate Mitt Romney in the 2012 presidential election in the United States. Romney was recorded as saying behind closed doors in a fundraising event that because

47% of Americans are dependent on the government for all their needs, they would never vote for him, who purportedly represented individual autonomy and self-reliance. Ironically, it is said that Romney lost the election by attaining approximately only 47% of the votes cast that year.

11. Woodward also offers a brilliant analysis of what she calls “bureaucratic rage”; that is, the rage we encounter at having to deal with the impersonal and rigid nature of bureaucracies of all kinds, an impersonality and rigidity that we experience very personally. See Woodward, 2009, pp. 165–194.
12. We can think here of the logic of Robert Bellah et al. (encouraging involvement in associational life) and of Robert Putnam (asking us to reinvent community by political action); see Rose, 1999, pp. 180–182. Bellah, Madsen, Sullivan, Swidler, and Tipton, 1992; Putnam, 2001.
13. This argument is what makes me leery of ideas like “service learning,” “community work,” “volunteerism,” etc.—these may be ways of working, perhaps inadvertently, with neoliberal rationalities to restructure our relationship to the State and its obligations to us.
14. Using Young’s tale, I have critiqued the notion of merit (Baez, 2006); I have also critiqued how Young and Dewey’s visions of schooling represent dystopias about schooling and government (Baez, 2013b, pp. 31–49).

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4

Database

Data-Basing

Few can question that there has been a proliferation of databases in contemporary society, a phenomenon made possible by informational technologies, the increasing commodification of knowledge, and the privileging of statistical reasoning in governmental rationalities, as we discussed in previous chapters. We now have the technological ability to collect and organize information into databases that reach into the innermost recesses of our lives, as Michael Perelman says. These databases are usually owned by giant corporations and nation-states who amass information as a source of power (in the case of nation-states) or wealth (and power) in the case of corporations. Ordinary individuals usually do not have access to these databases, relegated mostly to being objects and consumers of the information contained in them (Perelman, 1998, p. 31).

According to Jerry Salvaggio, databases, large and small, have become ubiquitous, but even the small databases on our home computers can hold more information than was possible anywhere in the 1940s. The databases that raise the most concern, however, are those that can hold information on entire populations and over which most citizens have no control. Infor-

mation is now collected in massive quantities in databases, manipulated in innumerable ways, and shared with others in minutes, and all without the awareness of the subjects of the information (Salvaggio, 1989, p. 115). Thus, per Salvaggio, because we are unaware of what is being collected, by whom, and how, we cannot determine exactly how many databases exist. He indicates that in 1982, some 16 state departments had over 3.5 billion files on American citizens, and given the advances in technology, we can suppose that this number has now grown exponentially. What we do know for sure is that among the institutions that routinely collect data on individuals, we can include hospitals, state or provincial agencies, law enforcement agencies, federal agencies, credit agencies, employers, insurance companies, courts, banks, direct mail marketers, market research firms, car rental agencies, universities, schools, licensing boards, the armed services, cable companies, and utilities companies. Among the professionals who also routinely collect and store information in databases, we have psychologists, lawyers, and accountants (Salvaggio, 1989, p. 117). Myriad institutions and individuals collect data and store them in databases today.

In my previous chapters, I hovered around this phenomenon of the database, being more concerned with what I see as larger issues associated with information and statistics. I did not spend much space on the database because I believe that these other phenomena make possible the database. But the database reinforces these phenomena in specific, though not entirely obvious, ways. So in this chapter, I want to make central the idea of the database, and I use the databases about education as points of departure, mostly because those are the ones with which I am most familiar and also because information contained in them is used directly and explicitly in policy decisions. My overall argument is not about education per se, however, but about the role of the database in politics, not only in terms of how it reinforces the logic of governing in a world shaped by information and statistics, but also in terms of how the database is subtended by its own logic, one that should not be easily subsumed under notions of information and statistics, as is commonly the case in social analyses.

So, the database plays a key role in contemporary politics. This is not saying anything interesting. Of course databases play a key role in politics, as do many other things. But the role of the database is not as commonly assumed, that is, as an effective storing mechanism of information that will influence policymaking. This logic leads to arguments about databases that are concerned with questions of ownership,¹ validity and reliability (see Special Issue on Student Engagement, 2011. I will discuss this special issue in more detail later in this chapter.), privacy,² and surveillance (see, for example, Perelman, 1998, p. 31; Salvaggio, 1989, p. 115). These concerns,

however, while arguably valid, miss the ways in which the database works in the governance of individuals. My intent is to sidestep these concerns about databases and argue instead that the database as a technology for converting information into knowledge—or, more precisely, for converting knowledge into information—is increasingly central to the governing of individuals whose subjectivities, and thus their forms of self-governing, are tied to information contained in databases. We are increasingly becoming subjects via databases, a data-basing of our lives, if you will.

As I discussed before, and following Nicholas Carr, when a new technology emerges, people tend to ignore the medium in favor of the content (Carr, 2011, pp. 2–3), and this seems to be the case with the database. The medium tends to be overlooked, or downplayed, in favor of discussions about socioeconomic forces of which the database is but a part, albeit an important one, such as the informationalization of society, the commodification of knowledge, the violations of civil liberties, and so on. The database as a particular kind of technology within these forces needs to be made central. I do not question that the database is a part of what Manuel Castells argues are the informational technologies leading to a new communication system, one increasingly speaking a universal, digital language and integrating globally the production and distribution of the words, sounds, and images of our culture (Castells, 1996, pp. 1–2). Much of Castells' arguments, interestingly (and to illustrate the point Carr makes), are premised on data in databases on economic development, labor, information, social movements, and so forth, but he barely mentions the database in his voluminous work on the network society. Yet the database should warrant specific attention, for it offers the technology that allows the deployment of numbers and statistics as the privileged knowledge in a society like ours. In other words, the massive amounts of information in databases allow for the invention of statistical frequencies that make claims about populations necessary for bio-politics, and indeed they contain the generalizable information necessary to make arguments about information itself.

In the society of the statistic, it may be that to make any politically significant claim, we must resort to the database. The database allows us to dispense once and for all with the distinction between knowledge and information, for in the database, and perhaps because of it, knowledge as sets of organized statements that are transmitted systematically is becoming inseparable from its mode of communication, and today it may be impossible to make legitimate knowledge claims without the database. As I argued previously, following Jean-François Lyotard, knowledge is being transformed into “quantities of information,” which then transform relations between and among myriad institutions and individuals, all of which are being con-

verted into “data.” So knowledge must now fit new channels and become operational only if translated into quantities of information (Lyotard, 1984, p. 4). So Carr’s point about understanding the constitutive role that the medium plays in relaying knowledge rings true when one thinks explicitly about the database in contemporary societies.

The relatively recent expanse and sophistication of contemporary databases require that we recognize that what we know as institutions, individuals, economy, education, diversity, the State, globalization, the world, the universe—everything and anything—can be digitized, reduced to a “bit,” reframed as information, and transmitted as knowledge about one person—the logic of identity theft—or about many, about the world itself. This “informationalization” of knowledge via the database, however, should not be thought of simply in terms of its particular effects, such as the surveillance it leads to or the reductionism that is required by it. If the distinction between knowledge and information no longer matters in the so-called information age, then arguments about effects cannot presuppose that the database is merely a vehicle for knowledge that is used in bad ways. The database (re)creates that very knowledge in that it makes us see things in particular ways, and it can be manipulated to make us see the same things in other ways entirely.³ Thus, the database should be thought of as technological in the governmental sense; it transforms what we can see as knowledge as that which is numerical, calculable, and reproducible. Because of the database, knowledge can be manipulated in infinite ways—carved up, rejoined, despatialized and respatialized, detemporalized and retemporalized, withheld and made accessible, and on and on, depending on the government rationalities at issue. So let us take a closer look at this technology, the database.

Systems

To consider fully the relationship between the database and government, it is important to understand the diverse nature of databases. According to the Paragon Corporation, a firm specializing in database management systems, databases have existed since the beginning of civilization and “in fact define civilization.” I find this logic interesting for the kind of presentism that premises it. We are told that when “man needed to store knowledge or keep track of information, they [*sic*] wrote them down, cataloged them using paper indices. So the book was the very first kind of database” (Paragon Corporation, 2003). S. M. Deem argues that a database is the most recent manifestation of techniques of data storage, which started with the use of punch cards by the U.S. Bureau of Census in the 1880s (Deem, 1985, p. 3).

So in a sense, the database is more than a technology (in the limited sense of the term); it is a logic, a rationality. And this logic or rationality would suggest that there is really nothing inherently different about the database now and the generation and collection of knowledge in the past; what is different is simply the technology used to generate and collect knowledge. The database, under this logic, is simply a vehicle for transmitting knowledge. Its value is simply a matter of how well it transmits knowledge. We should wonder about this logic, but for now let us sidestep it and think about the electronic database.

Today we think of the database as being in electronic form. A database, according to Deem, is a generalized collection of data, integrated to reduce data replications, containing descriptions called schemas, and managed in a way that it can fulfill the different needs of its users (Deem, 1985, p. 8). He argues that the movement from punch cards to the electronic system of databases resulted from attempts to computerize more systems, which also brought with it new experts—system analysts—who took a comprehensive view of computing and data needs and thus introduced the concept of integrated files to be shared by a number of programs in more than one subsystem. The need to coordinate between the files of various subsystems led to databases containing a generalized, integrated collection of data, ideally for all the systems of an organization and serving all application programs. There was a sense in which changes in data should not also require changes in application programs, so that if the database was to respond efficiently to conflicting needs, it had to provide easy data representation and be supported by a variety of data access techniques (Deem, 1985, pp. 4–5).

It seems that the electronic database emerged in the 1970s, and this makes sense when one considers that the informational technologies that dominate our present also began to take shape then (see generally, Deem, 1985, p. 5; For interested readers, Deem offers a much more extensive history of the database than I do in this chapter.). There are many different kinds of databases, but the idea of the “relational model of databases” was introduced by IBM in 1970, according to the Paragon Corporation, and this has become the most common kind of database (Paragon Corporation, 2003). A relational model of databases is based on mathematical set theory, structures information that can be easily searched through, and is independent of any particular application.⁴ A “relation” is a mathematical term for a 2-dimensional table, such as a collection of records, and a relational database consists of many such relations, which can be stored on a physical device in a variety of ways (Deem, 1985, p. 135). But this device somehow seems hidden to us. Of course, the network model connects multiple databases electronically, thus obscuring the physicality of the actual data

storage of a particular datum, but the storage of data does have a physical form, remote as that might be to users of the database. We now also have something called a “database warehouse,” in which different kinds of data about disparate kinds of things can be easily stored and retrieved. Such a warehouse is both a physical and discursive concept.

Whatever the database’s model, the logic of the ways it stores information is to classify data along so-called natural data relationships, such as “children-parent-family” (Deem, 1985, p. 8). A database allows for the abstracted representation of data from its physical storage in order to allow for the manipulation of data; it minimizes redundancy of data by breaking them into distinct, nonduplicating sets, which can then be related in an infinite number of ways to produce an infinite number of representations; and given information processing technology, the databases of today increase the consistency of myriad data forms that were collected at different times and created in different formats (e.g., visual and verbal data can be stored in the same database). Now the development of databases (and their applications) are increasingly the work of specialists (see Lungu, Velicanu, & Botha, 2009, p. 84).

We should think of database systems, not in terms of computer- or information-science lingo, as I have summarized it just now, but in terms of their role in the overall social administration of individuals. Databases allow for systemic administration of society, for statistical laws can be invented from them. One need only collect more things in a relational database, and regularities and anomalies can be made to appear. The more information one has about everything, the more inductions one can make. Of course, to see events and people as “data” requires a particular ordering of the world. Social phenomena is objectified, so that the inner workings of people, of institutions, of anything, can be known as data and administered; the world, that is, has been reduced to “empirical” facts that can be observed and made objects of knowledge and thus of administration, irrespective of the feelings and values of the observer. The social world, and its individuals, can now be made into “things” that could be ordered systematically and taxonomically within a functional system that is administrable (see Popkewitz, 1997, p. 19).

What makes the database so useful is that one can dispense with meta-physical questions about time and space. The relational database, for example, allows for disparate things to be organized into all kinds of relationships and interactions, no matter what the actual physical separation between them. Spatial concerns do not matter. Japanese children can be placed next to American ones, easily and with lightning speed. Thus, time does not matter either. The longitudinal database takes care of that; we can

know things now and in the past and privilege either as it suits the imperatives of social administration. We can invent information about the idyllic classic college of the past and its population, for example, and we can instantiate that information into a model for today's college and population (the retention studies rely upon such a fantasy to give them coherence), despite the fact that we are dealing here with different eras—different worlds, actually. Of course, to be able to do this requires that one collect information about many things, and it requires an ability to comb through the database to uncover such patterns, a point I turn to next.

Mining

The importance of databases in contemporary societies has led to the establishment of a new way of generating knowledge, one entailing the combing through a database or sets of databases to uncover patterns. The term “data mining” now emerges as a new field of inquiry. It entails a secondary analysis of databases in that the researchers who do this usually had no role in collecting the information stored in the database and thus no control over the ways the information was reported or classified. As is typical of any emerging and faddish methodological approach, there are increasing attempts to standardize data mining. One such attempt contends that data mining encompasses six phases: problem conceptualization; data collection, selection, storage, and retrieval; data preparation; data modeling; data analysis, model understanding, and model validation; and information visualization (see Schoech, Quinn, & Rycraft, 2000, pp. 635–626). And, as is also typical of emerging fields of study, a whole economy has developed around this form of inquiry, so that today we see the availability of various tools and techniques to assist the data miners, such as Innovation Toolbox for conceptualizing problems, SurveyWin for gathering data, as well as a plethora of data warehousing tools, search engines, and database query systems (see Schoech et al., 2000, p. 638). In the field of education, we are seeing more and more calls for data mining.⁵

Other than its role in government, what is interesting to me about data mining is that it goes against traditional ideas about research, which presuppose that research should answer *a priori* questions—one does research to answer a specific question. With applied fields, one does research in order to answer questions necessary to address particular problems. For all the aura of scientificity that is given to data mining, it is neither like basic nor applied scientific research, for which data collection is the means to answer a specific question. Data mining entails no *a priori* questions—there is the mining and then there is the question. Much of the critiques of data

mining, therefore, illustrate the kinds of conventional beliefs we have about research. We imagine a researcher responding to actual (conceptual or practical) problems, not one who goes out looking for them. We imagine research that is objective, problem-driven, and truthful. So much of the critiques of data mining tend to focus on the reliability of the information in databases.

David Hand, for example, argues that the idea of data mining only recently has taken hold for statisticians because they have tended to work with relatively small and clean datasets (it seems he does not account for the historical origins of statistics as the state-sanctioned, massive collection of information about populations), but that today's databases contain millions of records, in which "clean" data (i.e., data that is invalid in some way, including selection bias) cannot be guaranteed and in which spurious relationships may be found (Hand, 1998, pp. 113–114; see also F. B. Baker, 1965, pp. 147–149). Of course, information in many databases often is "personal," that is, collected and used to allow claims about us personally, and the actions that result from the statistical probabilities invented with them most certainly affects us personally, as I explained in the Chapter 3. Thus, we must wonder what more than just data gets called "unclean" or "invalid" in all this, a point illustrated most dramatically when we think of statistical fatalism and the state of exception that supports and is reinforced by it.

All this is neither here nor there, for data mining is the logical extension of the governmental rationalities that shape our present, but which it obscures. As is typical of all fields of inquiry claiming scientific validity, arguments for data mining reify the phenomena that led to the data and thus ignore the sociohistorical conditions of their own possibility. For example, in a typical justification for data mining, we are told that as so-called information institutions (presumably all organizations) transform their role from passive data collection to a more active exploration and exploitation of information, they face serious challenges in how to handle the massive amounts of data that they generate, collect, and store. According to this logic, data mining offers these "information institutions" a technology that can access, analyze, and interpret information intelligently and automatically (see, for example, Chen & Liu, 2004, p. 550). Such reification basically takes for granted that massive amounts of information are already being collected in databases, and so one might as well mine them (see, for example, Orange, 2009). The logic of data mining illustrates, essentially, an implicit understanding that the database is an end in itself, not a means for solving a specific problem. In the so-called information age, the point is to create databases, and the questions about their utility can be deferred to another day.

Of course, one mines in order to establish generalities, which will have the force of a statistical law, as I explained in Chapter 3, justifying particular kinds of practices, which are enacted on very specific, nonstatistical individuals. This statistical fatalism cannot be made explicit, either to the subjects of these databases or to the miners themselves, for obvious reasons. Individuals in liberal societies (and perhaps in others too) will resist if they see this as an imposition on their freedom. The miners must believe themselves to be acting objectively as researchers in order to avoid having to address the ethical questions their professions would likely require if this were made explicit. At any rate, databases would make no sense, and would serve no purpose, without technorationality, the informationalization of knowledge, statistical reasoning, and bio-politics. And so now let us tease out these issues in the specific context of education.

Education

The 2006 Spellings Commission Report on higher education, “A Test of Leadership,” spotlights what seems a growing interest among policymakers in using large-scale, longitudinal databases for accountability purposes. To meet the challenges of the 21st century, we are told, a “robust culture of accountability and transparency throughout higher education” is necessary. Accountability and transparency, it seems, are really only possible with the establishment of reliable databases, and so the Commission recommends the “creation of a consumer-friendly information database on higher education with useful, reliable information on institutions, coupled with a search engine to enable students, parents, policymakers and others to weigh and rank comparative institutional performance” (Commission on the Future of Higher Education, 2006, p. 21).

Such an imperative for a database implies democratic motives (e.g., easy access, accountability, etc.), and the report does indicate that others should be “encouraged and enabled to publish independent, objective information using data from such . . . database[s].” The databases must be designed to recognize the complexity of higher education, while also standardizing and customizing searches, and making it easy for users to obtain comparative information on things ranging from cost to admissions data to college-completion rates to learning outcomes (Commission on the Future of Higher Education, 2006, p. 22). The report indicates that it is essential for policymakers and consumers to have access to a “comprehensive higher education information system” in order to make informed choices about how well colleges and universities are serving students (Commission on the Future of Higher Education, 2006).

The logic of this report is that there is a lack of useful data and consequently, of accountability, and thus the lack of data hinders policymakers and the public from making informed decisions and prevents higher education from demonstrating its contribution to the public good. Colleges and universities must become more transparent about cost, price, and student success outcomes, and they must willingly share this information with students and families. This information should be reported publicly in aggregate form to provide consumers and policymakers with an accessible, understandable way of measuring the relative effectiveness of different colleges and universities.

Interestingly, the authors of the report, as do most advocates of databases, conflate knowledge about higher education with the technology for generating information, for without these databases, “policymakers, scholarly researchers, and members of the public lack basic information on institutional performance and labor market outcomes for postsecondary institutions” (Commission on the Future of Higher Education, 2006, p. 22). The Department of Education has given millions in grants since 2006 to help states develop their own longitudinal databases relating to higher education, and this is in addition to the already publicly supported databases maintained by the National Center for Education Statistics (NCES), which have been used by educational and other researchers for many years now.

Although databases of many kinds have long been used in education research, the longitudinal databases like those proposed by the Spellings Commission are meant to track students from “cradle to grave,” but few in education raise the kinds of concerns I discussed previously relating the collection of massive amounts of information. Yet the databases associated with higher education, for example, are very large, and they seem to be proliferating. For example, at the national level, there are the databases housed and controlled by the NCES, the National Science Foundation (NSF), the Educational Testing Services, and the Higher Education Research Institute at the University of California, Los Angeles. Some databases entail population studies (e.g., Integrated Postsecondary Education Data System, Survey of Earned Doctorates, etc.), and others consist of nationally representative samples (e.g., Baccalaureate and Beyond Longitudinal Study, High School and Beyond, National Longitudinal Study, National Education Longitudinal Study, National Study of Postsecondary Faculty, Survey of Doctorate Recipients, Cooperative Institutional Research Program, etc.). There are also the National Student Loan Data System, the National Collegiate Athletic Association database, and the National Student Clearinghouse, all of which track student enrollment or receipt of federal aid (For brief descriptions of the major databases in higher education, see Strayhorn, 2009.).

In addition, almost all the states currently maintain statewide longitudinal data systems for reporting, accountability, performance funding, and research. Some states use their longitudinal databases to link postsecondary data with other data, such as that relating to primary and secondary schooling, workforce development, and so on. In addition, institutions themselves develop their own databases to keep track of course registration, financial aid, payroll, degrees, and other aspects of their functions that require unit-record transactional data. These are just samples of the kinds of databases used in the field of higher education. I have not mentioned the many others dealing with K–12 and other aspects of education, as well as the information about education, children, and youths in other databases from the Department of Health and Human Services, the Department of Labor, the Center for Disease Control, and so forth.

There are thus already massive amounts of information being collected in and about education in numerous databases. Yet, again, one sees reifications of the need to create more databases in order to make decisions in education, especially in the simplistic, if not also silly, arguments about the need for evidence-based decision-making in education (see, for example, Kowalski & Lasley, 2009, p. xi; see also Institute of Education Sciences, 2003). We may even reify the necessity of the database by analogizing it to biological phenomena. For example, one such analogy equates the database to DNA, and just as DNA is where the body stores coded information, the educational databases creates a “double helix” of information that “flows up” from each child to the system to the country to the world, and in return “trickles down” to performance norms by system, school, and student (see Cooper, Sureau, & Coffin, 2009, pp. 382–385).

Databases result in numerous knowledge claims about education. Indeed, one of the most infamous reports on education, *A Nation at Risk*, is premised entirely on the logic of the database (see National Commission on Excellence in Education, 1983). In addition to the use of the notion of risk as a governmental technology, the report’s actual data is the international comparison of test scores located in various databases. Indeed, we may reread the report as not just advocating standardized testing for its own sake, but for the sake of converting test scores into information that can be stored in a database. Yet it is important not to see the database as only furthering neoliberal or right-wing agendas, as many might assume is the case with *A Nation at Risk*.⁶

For example, because of databases, we can now know, among many things, that (a) while almost every ninth grader expects to go to college, only 55% actually do (see Arnold, Lu, & Armstrong, 2012, p. 1); (b) more than one fifth of the immigrant population in the United States has less

than a ninth-grade education (as opposed to 3.3% of the native-born population) (see Kim & Díaz, 2013, p. 13); (c) what tells us more about the gender gap in the science fields is not in-between group comparisons but within-person ones (see Riegle-Crumb, King, Grodsky, & Miller, 2012); (d) Black and Hispanic access to selective institutions lags behind that of Whites and Asians (see Posselt, Jaquette, Bielby, & Bastedo, 2012); (e) poor children and those needing ESL are not receiving the benefits of early childhood intervention programs (see Morgan, Farkus, Hillemeier, & Maczuga, 2012); (f) children who were doing well in school exhibited greater levels of self-regulation than those who were not performing as well (see Buckner, 2012); and (g) traditional institutional surveys are less predictive of retention than institutional databases (see Caison, 2006). All this is knowledge to be sure, and even when it deals with claims that seem obvious or intuitive to us (e.g., that Blacks do not attend prestigious institutions in the same numbers as Whites, and that sociocultural ideas about gender have more to do with gender gaps in male-dominated fields than academic performances), because they are couched in terms of the law of large numbers, they are given more credibility.

In addition to what may seem to many of us as often stating the obvious, we can point to a number of other research-related concerns with educational databases. We have not seen in the field of education, ironically, the kinds of critiques of databases one sees in other fields, such as that they lead to surveillance and violations of privacy, the commodification of knowledge, forms of social control, and so on.⁷ But there are other concerns that I have heard or read about. There is a sense that database research is privileged over other kinds of research. Case in point: Grant proposal instructions from the American Educational Research Association (AERA), funded by the NSF and the NCES, state that all proposals must include the analysis of data from at least one of the large-scale, national, or international databases supported by the NCES, NSF, or other federal agencies such as the U.S. Department of Labor, the U.S. Census Bureau, or the National Institutes of Health. Applicants for these grants must choose research topics that can be supported by proposed databases. These grants are restricted formally to studies that use large databases; those conducting other kinds of studies should look for funding elsewhere.

Another similar concern, brought to my attention by my former colleague Glenda Musoba, is that the use of databases can become restrictive, such as when a research proposal must include the use of a particular database. The AERA funds training institutes for researchers looking to use its databases on their proper use. In these training sessions, apparently, trainers emphasize particular research strategies, variable coding, panel weight-

ing (i.e., weighting to avoid unequal selection opportunities), and other statistical tools that seem to elevate guidelines to rules. Also, even when contested by some researchers, apparently the NCES makes clear that it opposes any published research using the NELS88 database if it does not use its designated panel weights.

We can see also how the uses of these databases lead to reductionist claims and to a privileging of measurement over meaning. For example, many researchers use databases to measure the notions of social and cultural capital, but then reduce these ideas to such things like family income and parental education, thus undermining the real sophistication of social and cultural capital as reflecting class structures.⁸ Also, similarly, the databases lead to claims conflating race and ethnicity (see, for example, Perna & Titus, 2005), yet race and ethnicity are different from each other and give light to different sociocultural phenomena.

The concern I just mentioned with the privileging of measurement over meaning gets to the main concern I read about with regard to educational databases: the concern about the reliability and validity of the claims that can be made because of them. I will give an example that became a small controversy in my field in order to illustrate what I see are red herrings in such methodological critiques of databases. These critiques tend to focus their arguments on measurement but fail to account for their own possibility. The controversy related to a fall 2011 special issue of *The Review of Higher Education* (RHE) (“Special Issue”) dealing with critical analyses of a project titled the National Survey of Student Engagement (NSSE), as well as its derivative surveys and databases (which I will call here collectively the “NSSE Project”) (see Special Issue on Student Engagement, 2011). My take on the controversy is that, apparently, those who control and administer the NSSE Project were offended, particularly by what they deemed the dismissive language of Michael Olivas, who wrote the introduction to the Special Issue, although their stated argument seemed to be that their defenses of the NSSE Project were not included in the Special Issue.⁹ Apparently a session relating to the Special Issue had been accepted for presentation at the following annual meeting of the Association for the Study of Higher Education, which owns RHE, but complaints by the NSSE Project people led the president of the Association to, first, cancel the session and then to change it to allow for a balanced view of the NSSE Project. I mention all this because I found the whole situation comical in a turf-war kind of way, and it also appeared to me akin to the adage, “My lawyer is bigger than your lawyer,” except that it looked like “My positivism is better than your positivism.”

The NSSE Project is premised on the idea that student engagement is important to retention and academic success in college. It touts that over

1,400 institutions participate in its various surveys. I would file the entire NSSE Project under the tired and overwrought college-retention and -persistence literature. Olivas seems to attribute the participation of the numerous institutions in the NSSE Project to the “NCLB-related ethos,” in which assessments matter at all levels (see Olivas, 2011, pp. 1–2). Yet, despite what could have been significant critiques relating to the “NCLB-related ethos” that Olivas provocatively offers as an avenue of critique, the logic of the critiques of the NSSE Project in the Special Issue related to its validity and reliability, a logic that unfortunately hides more than it tells (in particular, see Porter, 2011).

Essentially, and again, the entire controversy reflects an argument about whose positivism is better and not the logic of an incessant collection of data, measurement, and manipulation of information. For example, one of the critiques of the NSSE Project indicated that we need alternative measures for understanding how to reduce institutional racism and racial bias, which the NSSE Project apparently ignores (see Dowd, Sawatzky, & Korn, 2011); in another critique, the argument was that the NSSE Project apparently overemphasizes actions and activities at the expense of beliefs, attitudes, and perceptions (see Nora, Crisp, & Matthews, 2011). I read critiques like this as well-meaning but ultimately as requiring more data collection that will inevitably be stored in some kind of database. What all these critiques fail to inquire into is how the logic of the NSSE Project is made practicable in the governing of students. What actual practices are rationalized by the databases in which the purported information about engagement is stored? How are notions of “engagement,” or for that matter, of “institutional racism” or “attitudes, made “real,” that is, put into practice? This would be an inquiry that is foreclosed by insisting solely on a positivistic critique of the reliability or validity of any database.

All of these research-related concerns with educational databases are justifiable, but beside the point. They focus one’s attention away from the logic of the database itself, how it has come to constitute knowledge, and how that knowledge is made practicable in the governing of individuals. Much of what “education” now means to us can be represented by the figure of the “database.” Indeed, “accountability,” a concept appearing often throughout contemporary education discourse (and which will be my concern in Chapter 6), is unintelligible outside a system of databases, a system that gives us what we now call knowledge, which then is turned back on the system to spark conversions of new things into data, which will spark the creation of more databases. In a very significant way, we have been wrong in assuming that the database is necessary for ensuring or representing accountability; it may be that the reverse is true, that is, that accountability is

a necessary concept for ensuring and representing the database. What is made practicable by the database is the legitimization and creation of itself. Particular uses of a database may be resisted, but not the fact of its use, for its logic is one of giving us knowledge and of needing more databases if we want better knowledge. What the discourse on the database actually shows is that the database is its own means of production, and thus its own end.

The database, then, legitimates itself, as well as new methods (e.g., data mining), and now new fields of study. We have seen, for example, calls for an “education informatics,” a reification that takes as given the fact of the proliferation of information but not its sociohistorical conditions. Information is seen as growing at an increasing rate, we are told, and so educators must learn how to make sense of it (see, for example, Mandinach & Gummer, 2013). These calls are premised on a belief that the field of education lacks formalized informatics programs similar to those that are imagined to exist in the field of health. Informatics entails technology used to identify, organize, and distribute information in the field of education (see Carr, Collins, O’Brien, Weiner, & Wright, 2010). These calls also often propose that in order for such informatics to take hold, it must be bureaucratized into an academic field of study, assuming correctly, given the imperatives of professionalization, that the institutionalization of a particular kind of knowledge in university study will go a long way toward its legitimation (see, for example, Carr & O’Brien, 2010; Collins & Weiner, 2010). One idea of an education informatics is that understanding the so-called information-seeking behaviors of the education field is necessary for ensuring that research in education is collaborative, replicable, shared, and reviewable (Wright, 2010). I see in this last argument yet another database about “information-seeking behaviors.”

What is assumed by this informatics logic is that there are too many disparate sources of information. Indeed, despite myriad databases relating to education, some have even argued that what the field of education needs is systemic data about itself (e.g., about how its products do and how people relate in different contexts over time), and also, the field needs a method through which it can generate this kind of information about itself (see, for example, Carolan & Natriello, 2005). What I see in these claims about the lack of systemic knowledge of the field and about a need for an education informatics is a structure of feelings, a discomfort, an unease, not with a lack of knowledge about the field—such knowledge can be found everywhere and takes many forms, if only one can open oneself to the possibility that knowledge need not be found in a database—but with the existence of too much unclassifiable information, that is, too much qualitative,

philosophical, normative information—knowledge, that is, not obviously reducible to a database.

The rationalities undergirding the database is that of the informationization of knowledge, technorationality, and statistical reasoning, as well as the reordering of individuals and populations in accordance with these technologies. Indeed, the database's legitimacy is in a significant sense discursive, that is, it is a logic, one we see also in what I think is a rise in encyclopedias, compendia, edited books, and treatises, indeed, in the imperatives of providing all-engulfing (because of its pervasiveness and minuteness both in terms of content—all is included—and its technicality—all is converted to bits), reproducible, and manipulable information in one easily accessible and transferable place. For those of us in academe who forbid our students from using Wikipedia in their papers—forget it, since it is a logical, nay, inevitable (and democratic, if you will), manifestation of the imperative of providing all-engulfing information in one easily transferable place.

We may argue correctly about databases of the reductionism and scientism they promote, as well as the incessant surveillance and invasions of privacy they permit, but understanding them within the imperatives of government sheds light on how they are productive of the things they purport to represent; that is, they act on the world to change it by changing the way we know it and thus the way we can act on it. The database's governmentality is (a) technological in that it makes all phenomena numerical, calculable, and reproducible; (b) practical, in that its information is used to put things into practice for governing individuals; (c) epistemological in that it dictates what we can know, and (d) ontological, in that it alters what is—say, education, or the individual, or identity, or a nation at risk, or . . . whatever. The database is important to the rationalities of government because it tames irreproducibility, restructures social phenomena by converting it into data so that it can be fixed or unfixed, reconfigured in terms of time and space, and made reproducible, comparable, and efficient. The logic of the database, then, is one of power, a point with which I conclude this chapter.

Power

Susan Braman argues, as I pointed out in Chapter 2, that as a result of the massive collection of information, presumably in databases, the mutual transparency between the individual and the State has been destroyed, and so now the State knows ever more about the individual, but the individual knows ever less about the State (Braman, 2006, p. 6). This is true in a sense, for the State can collect much more information about individuals than is the case with the reverse (but so can corporations and other large institu-

tions). Such an argument, however, takes as *a priori* that there is an individual and a State, but these are themselves constructs of the way information is deployed in a given space and at a given time. Yes, to be sure, there are flesh and blood individuals, and there are actual state officials, offices, laws, and so on. But what Braman is talking about is the “identities” of the individual and that of the State, which are constructed and narrated in various, often-changing ways. And this is where I part company with Braman. I do not want to give ontological status to those concepts; they are the result of sociohistorical processes and deployments of knowledge, and our task should be to uncover how such things are given meaning, how such meanings are put into practice, by whom, and for what purpose. In short, we should understand databases in terms of governmental power.

Having said this, I want to avoid the traditional arguments about power that are associated with databases, such as that they lead to state and corporate surveillance and violations of privacy. Notions of surveillance and privacy also rely upon metaphysical presuppositions about the individual, freedom, juridical rights, and so on. Yes, the State and other institutions amass great power in collecting massive amounts of information stored in and generated from databases, and this does mean that we are under constant surveillance and that our privacies are jeopardized. But I want to avoid privileging too much the juridical notion of power and focus instead on governmental forms of power. Liberal governmentality seeks to avoid violence and direct forms of coercion, finding it more efficient to ensure that individuals make use of their freedoms to control themselves. The model of the economy provides for such a rationalization of the exercise of power, a point I address more fully in Chapter 5. This means more than simply weighing costs and benefits; it means recognizing the immanent logic of the economy and bringing to bear its dynamics on the population and its individuals, as the case may be.

Liberal governmentality replaces the centered notion of the sovereign with the freedom permitted by the notion of the market as a mechanism for government action and its evaluation (see Optitz, 2011, p. 98). Information in databases creates a marketplace of information that individuals can choose from in order to calculate their risks, security, happiness, and so on. It also provides the kind of knowledge individuals will need to judge the ways they are governed by political entities (e.g., accountability, etc.). While juridical notions of individual rights against state government, as well as the moral constraints on the exercise of power, do set some limits to sovereign power, it is the notion of “utility” that becomes the key criterion for justifying governmental action (including state action) as well as limiting it. State

action has become unmoored from the previous criteria of legitimacy and evaluated solely with regard to its effectiveness (Optitz, 2011, p. 101).

None of this is to say, however, there is no recourse to violence, coercion, and the exception in liberal governmentality. As I explained in Chapters 1 and 3, a threshold is established via statistical reasoning beyond which compulsion, discipline, and the exception will be legitimated for individuals and groups deemed recalcitrant or dangerous in some way. This threshold too is made possible by information stored in databases. Here, the paradox of liberal forms of government (but not an anomaly) is that notions of risk and calculative knowledge, the statistical reasoning undergirding them, and the collection and storage of massive amounts of information about every individual and every activity justifies State intervention only when nonintervention is required; that is, State intervention is necessary because the processes in which it must not intervene—the choices of individuals, the self-correcting health of the population—are permanently threatened (Optitz, 2011, p. 99). Once the State intervenes, however, resistance will likely follow, a structural condition of liberalism, and such resistance with regard to the use of databases comes in the form of discourses on civil liberties such as those of privacy, surveillance, and so on.

The control of the database, therefore, becomes an important stake in political struggles in the so-called informational age. We can now see why certain kinds of knowledges become privileged. Economics and statistics become privileged knowledges specifically because of the power of databases; they are unthinkable without them. Those knowledges, especially, justify the exercise of power and the exception. I think we need to see in the proliferation of databases much more than epistemological questions about what counts as knowledge and methodological ones about reliability and validity. We should see in this proliferation the kinds of claims to, and struggles for, political power in an age in which information and information processing are central sources of power. The database, in short, might be a key technology of contemporary societies for many other reasons than that it stores a great deal of commodified, reductionist information that is used to watch and control citizens.

So we might attend to the creation and proliferation of databases, to the attempts to restrict their creation or their contents, to the attempts to control their uses via intellectual property regimes, to the ways in which surveillance and invasions of privacy are called into question, to any defenses and critiques of them, to all this as much more than battles over particular uses of the database, particular problems of the database. These are political struggles in a larger battle over legitimacy and power in a society that is governed by technorationality, statistical reasoning, and informational technologies.

For to gain control over the database—and by this I mean much more than a physical control, but also a control over the discourses on the database—might be, in a sense, to gain power in contemporary societies.

Notes

1. For example, there are concerns that easy pirating of databases for economic or altruistic reasons makes them less valuable to their owners, a problem not well addressed by current intellectual property laws, which do not offer *sui generis* protection of databases (see Hunsucker, 1997). Others argue that in protecting databases, a balance should be struck between protecting the return on investment of the databases as incentive for creating databases and restricting scientific data from remaining exclusively in private hands (see Greenbaum, 2003).
2. For example, there are concerns that the collection of consumer data gives consumers little ability to keep their personal information private (see Bartow, 2000).
3. For example, if we compare test scores among American children over time, we can conclude that American schooling is succeeding better than in the past. But if we take those same test scores and compare them to those of children in other countries, then we can also conclude that American schooling is failing.
4. Deem argues that the relational model is the major model of database systems besides the network model, which seems to me to be essentially a relational model for relational model databases (see Deem, 1985, p. 5).
5. For example, there have been calls for the data mining of online course delivery systems (see Romero, Ventura, & García, 2008). There have also been calls for the data mining of institutional student data systems (see Guruler, Istanbulu, & Karahasan, 2010).
6. Indeed, there may be progressive or creative uses of databases, ones that reject a positivistic notion of information and that allow for intersubjective, interpretive, and nonstatistical uses of databases. For example, see Daniel & O'Rourke (2004).
7. My theory about why this is the case is that the field of education lags in reading outside of itself, and so the lack of critiques of databases that one sees in other fields have yet to arrive in education.
8. For an example of such reductionism, see Coleman, 1988. Remarkably, this article is often cited uncritically by many quantitative analyses of cultural and social capital in education. See, for example, Perna & Titus, 2005.
9. Personally, I found Olivas' language funny, probably because I find the NSSE Project silly and meaningless, but also because I am partial to Olivas. Anyway, those of us who know Olivas know as well that his language in this issue was very much in his style.

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5

Economy

Economics

It does seem, as Steve Keen argues, that since the middle of the 20th century, at least, policymakers and state bureaucrats all over the world have looked to economics as a major, if not the sole, source of wisdom about our society and how it should run. He says, “The world has been remade in the economist’s image” (Keen, 2004, p. xiii). There is much truth to this. John Kenneth Galbraith quotes the economist John Maynard Keynes as saying that the ideas of economists and political philosophers, “both when they are right and when they are wrong, are more powerful than is commonly understood. . . . Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist” (Galbraith, 1962, p. 10). Of course, most economists probably do not want to see themselves as having such (ineffective) influence and will come to see themselves as the opposite, as having little influence. Daniel Klein, for example, laments the limited role economists play in policymaking, arguing that “elemental” economic ideas and “simple” policy solutions (read as: policies should promote private property and freedom of contract) are ignored by the public (Klein, 1999, p. 4). Klein’s self-serving narrative notwithstanding, I believe Keen is correct, but understates the matter.

Keen's argument (as is Galbraith, Keynes, and Klein's) seems really to be about neoclassical economics, which is the dominant source of the wisdom he speaks of, not economics per se (For those readers interested, I have previously critiqued neoclassical economics and its role in higher education. See Baez, 2013a). Yet I would say that in liberal forms of government, the (prevailing) models of the economy have been the source of rationalization for governmental actions and limits. Government as a form of power different from sovereignty and discipline originated when the population became the sphere of governmental intervention and the economy the rationalization for the exercise of power. Liberal governmentality replaces the idea of the all-encompassing sovereign with the market as a framework for justifying and rejecting governmental action (see Opitz, 2011, p. 98).

So, in thinking about contemporary societies (and perhaps historical ones too), and especially in relation to the discourses on globalization, the information society, and so forth, it seems that economics provides the key framework for making claims about social phenomena. For example, we are told that "today's information revolution is creating new systems of political economy, just as the industrial revolution produced old systems that are now being transformed" (see Halal & Taylor, 1999, p. xvii). Or, that the "information era comes into being because of an incremental change in economic preferences" (see Sternberg, 1999, p. 5). Or that the predatory strength of the capitalist classes are linked to the global commercial media system in which nature has been superseded by media culture, and new electronic technologies are reshaping the context for the production of subjectivities and the colonization of the world (see McLaren, 1999, p. 15). Or that one of the fundamental features of the current technological revolution is that information has become the raw material of production and consumption (see Castells, 1999, p. 45). Or that the development of communications networks has organized the movement of globalization, particularly by multiplying and restructuring interconnections within these networks, so that now the imaginary is guided and channeled within this "communicative machine" (see Hardt & Negri, 2000, pp. 32–33). Or that the new features of the present world system are characterized by five monopolies (technological monopolies, financial monopolies, access monopolies of natural resources, media and communication monopolies, and weapons of mass destruction monopolies) (see Amin, 1997, pp. 3–5).

My point in listing just a few of these analyses is not to disparage them; I think they are empirically valid to the extent they subject "facts" to a particular framework. The framework is one in which the economy strongly dictates, if not determines outright, the social, psychic, political, and cultural

realms of a given historical period. And so these analyses very much follow the logic of Marxist, Neo-Marxist, or Marxist-leaning theories, such as the ones that see capitalism as an ever-expanding historical process, which not only shapes productive forces but attitudes and ideas too (see, for example, Beaud, 1983; D'Amato, 2006; Dobb, 1963). Social analyses, however, could focus the “information society” in terms of the primacy of culture or in terms of psychic phenomena (as opposed to that of the economy). While some analyses do this—those who focus on governmental rationalities, for example—most do not; most such analyses focus on the economy as the lens for making sense of contemporary society.

In saying this, however, I do not want to be read as saying that all analyses of societies use traditional economic methods, such as econometrics, but only that the major way of giving coherence to the information society is to focus on economic phenomena. It appears that in narrating what the information society is, the economy is deemed the base, and other things, like culture, are deemed part of its superstructure. For example, for Fredric Jameson, “post-modern culture” amounts to nothing more than an ultimate commodification, in which the market has become a substitute for itself, and it is as much a commodity today as any of the items it includes within itself (Jameson, 1991, p. x). I am also not saying in any of this that privileging the economy in social analyses is inappropriate. What I hope I am read as saying is that treating the concept of the “economy” as an empirical artifact is not likely to shed much light on contemporary forms of power. Doing so leads most analyses of the information society to emphasize unidirectional notions of power that define it almost entirely in terms of oligarchies, ideology, or capitalism, and other forms of domination or coercion, all the while obscuring the ways in which the notions of freedom are put into play in the processes of government.¹

An analysis of government entails decentering the economy, refusing to treat it in the formalistic ways that the neoclassical economic perspectives would have it or the substantive ways that many Marxist-leaning analyses would have it. Treating the economy formalistically entails seeing it as a space of pure economic rationality, seeing economic processes as ahistorical and disassociated from cultural and social institutions, and seeing the market as an abstraction that reproduces pure economic practices. Seeing the economy substantively, some examples of which I mentioned above, does take exception to the formalistic view of the economy, but tends to lead to an economization of cultural and social spheres, that is, these spheres are deemed embedded in, or governed by, the economic system (see Stäheli, 2011, p. 271).

I believe that the economy should be given emphasis in social analyses, not in a formalistic or substantive way, but in terms of how it works as a

framework for governing in advanced liberal societies, which are characterized by tensions between and among states, markets, and individuals, and by (neoliberal) rationalities of government that attempt to give coherence and practicality to these tensions in order to utilize them to govern. For this understanding of liberalism, Michel Foucault is instructive. He defines liberalism not as a theory or ideology, but as a practice directed toward particular goals and which regulates itself by means of a continuing reflection. It is a principle and method of rationalizing the exercise of government. Liberal governmental rationality, according to Foucault, always begins with the principle that there is already too much government, and so it poses the question of how proper government is to be achieved, that is, what is its necessity and utility (Foucault, 1981, pp. 354–355). One may think of liberalism as an ethos, one not necessarily premised on the idea that we govern less, but that we do so cautiously, delicately, economically, and modestly (see Barry et al., 1996, p. 8). In this way, liberalism is a kind of political reason that draws on intellectual and practical techniques and inventions from which the economy, the market, society, and the individual are constituted as distinct from political government.

My primary concern in this chapter is with the governmental rationalities in advanced liberal societies, and from this viewpoint I will focus on neoliberalism, which is a concept often used in leftist political arguments against privatization and other economically driven social forces that lead to inequality. In a significant sense, neoliberalism is the left's imaginary, but in the negative—the left sees itself in opposition to it. But we will recast this idea of neoliberalism and ask, what is made thinkable in the discourses on neoliberalism, and how are we to be governed, and to govern ourselves, as a result? While neoliberalism may be viewed “negatively” (and correctly) as an attempt to undermine the welfare state in order to further the imperatives of capitalism, it may be viewed “positively” (or productively) as rationalizing a shift in governmental practices, with a different role for the nation–state, a facilitative role. What we will call neoliberalism involves empirical realities, of course, but also *political inventions*, that is, the creation of particular rationalities that seek to shape people's behavior. It will be these inventions that will concern me here. So let us turn to neoliberalism now.

Neoliberalism

Neoliberalism, as I indicated in the previous section, appears as part of the left's imaginary. Many critiques of the “new economy,” “globalization,” “information society,” and other international phenomena focusing on the imperatives of late capitalism, and particularly on practices such as privati-

zation, deregulation, marketization, corporatization, and so on, attribute all these phenomena to “neoliberalism” (see, for example, Bourdieu, 1998; Harvey, 2005. In the field of education, see Apple, 2001; McLaren, 2004; Stromquist, 2002). These practices are seen as curtailing the welfare state and the public good such a state is figured as representing. There is a strong belief that, especially since the 1980s, policymakers worldwide began dismantling the welfare state (see Paul, Ikenberry, & Hall, 2003, p. ix). For example, David Harvey argues that deregulation, privatization, and the withdrawal of the State from many areas of social welfare have been common since the 1980s, and almost all nation–states have embraced these practices, voluntarily or in response to covert pressures (Harvey, 2005, p. 3). This belief tends to overemphasize the effectiveness of such policies and also fails to account for the historical and institutional contexts that make neoliberal policies more or less possible in a particular country (see Campbell, 2003, p. 248; see also Bourdieu, 1998, p. 33). And even in countries in which neoliberalism flourishes, such as in the United States, there is a tendency to ignore differences related to particular policies (e.g., in the United States, there is a long history of state intervention in matters of public health) (see Baldwin, 2003, pp. 118–119).

Yet a sense of the overriding power of neoliberalism is strong in leftist critiques. The linking of neoliberalism with globalization and other large-scale international economic forces allows the left to exalt ideas like democracy, the public, and the State, which are all conflated and set against neoliberalism as a way of giving these ideas coherence and for the left a purpose. Such leftist critiques are correct to focus on the negative economic and social impact of neoliberal economic practices, but by reducing neoliberalism to a kind of ideological imperative subtending particular practices, they fail to give an adequate account of neoliberalism’s logic, that is, what it actually assumes and rationalizes. Indeed, the practices associated with neoliberalism are not new phenomena, as there has always been in liberal societies a constant reworking of how the state is to function, a constant reshifting of the control and administration of state services among private and public entities, and a constant tension between what is the purview of the State and what is the purview of civil society, private citizens, and so forth (see generally, Feigebaum, Henig, & Hamnett, 1999, p. 7). We do not need to conjure up a neoliberalism to explain these things, as the State’s intervention in private spheres in liberalism has always been considered suspect.

There is, however, a neoliberal rationality that greatly shapes contemporary politics, but its target is not so much the state or that abstraction called the “public,” as much as it is the population—to govern it effective-

ly—and particularly, the *individual* as a conduit for working on the population; it seeks to reconstitute the individual into one that defines her worth entirely in terms of her economy, that is, in terms of how efficiently she can calculate the economic benefits and costs of her actions (we see now how information, statistical reasoning, and databases play key roles here). This neoliberal rationality attempts, with more or less effectiveness, to entice the individual's freedom but at the expense of altering her ethical ties to her world, a world that she will see in terms of economic calculations if she is to consider herself a responsible citizen. Stated differently, this individual will be *invented* in order to make her more manipulable to an administration that entices her freedom so as to make her more self-responsible and self-reliant. Yet neoliberalism, in accounts such as the ones I mentioned earlier, is often cast as the return to, or perhaps a recent manifestation of, classical liberal economic theory—but this is not the case. And so the term “neoliberalism” actually may be a misnomer.

Classical economic liberalism was premised on a theory of the market according to which the pursuit by each individual of his or her private interests ultimately leads to a system of voluntary cooperation that benefits society as a whole (see Gaus, 1983, p. 183). Adam Smith is often espoused by many neoliberal and neoclassical economists as the origin for their arguments, but from a narrative analysis or rhetorical standpoint, it seems more accurate to attribute this origin to Jeremy Bentham, who saw human beings as products of innate drives to seek pleasure and to avoid pain, and all social behavior as rooted in these drives. For Bentham, society was a fiction and only individuals existed, and when one says that something is in the interest of society, one is saying simply that we can determine the sum of the interests of the individuals that make up that society.²

Bentham's logic notwithstanding, the liberalism of Smith, Bentham, and John Locke—three of the most famous classical liberals, but there are others as well—did not reject the State as such; it just limited its role to protecting the market against intervening forces (e.g., foreign states, unfair and ambiguous rules of exchange, etc.) but otherwise should leave the market alone. The market was deemed a sphere of natural laws in which self-interest ruled, although such self-interest necessarily entailed working with others.³ Furthermore, the classical liberals believed that the market would not provide for certain necessary things, such as education and utilities, and so the State was deemed necessary to address these flaws in the market. Classical liberalism also established a set of ideological (ultimately material) dichotomies that have come to structure our thought and action, such as the market versus the state and the economic sphere versus the social sphere (see Gaus, 1983, p. 184), privileging the first term in these dichotomies.

Another form of liberalism, one I think should have been more appropriately termed “neoliberalism,” but which I call, following Gerald Gaus, the “new liberalism,” provided a critique of classical liberalism beginning in the 19th century, primarily by arguing that *in theory*, the public good might be furthered by permitting individuals to pursue their private interests, but *in practice*, an unfettered market was not in the public’s interest (Gaus, 1983, p. 199). The logic of this new liberalism is that we need a state to protect individuals from the flaws and instabilities of the market. These arguments were espoused by political economists like Thomas Malthus and John Stuart Mill, by philosopher John Dewey, and then later by economists like John Maynard Keynes, John Kenneth Galbraith, and Charles Lindblom. This new form of liberalism advocated a welfare state to protect individuals against the risks of a “free market” (e.g., discrimination against older people; the problems with externalities, etc.), and to ensure that certain public goods (such as water, light, education) be provided to all. This form of liberalism also assumed the dichotomies that structure our lives, such as the market versus the state and the economic versus the social, but it privileged the second term in them. It also reinforced another dichotomy: private versus public, and it did so in way that exalted the latter, constituting it as an equal (or perhaps greater) moral imperative (see generally, Gaus, 1983, p. 194).

It is the new liberals’ version of the welfare state, I think, that we have romanticized in leftist politics, and this is why the effects attributed to neoliberalism seem so problematic. As Paul Spicker proposes, the welfare state is characterized by collective action for social protection. This notion starts with some premises that people live in society and have moral obligations to each other; welfare is maintained through social action that seeks to meet their needs and protect their economic and social rights; the state is the means of maintaining welfare in society; and welfare is maintained through social policy (Spicker, 2000, p. 5). Its logic is one of collectivism or communitarianism, and not that of individualism, as is the case in classical liberalism. Privatization, for example, according to Spicker, is motivated by a desire to inject the values of the marketplace into the provision of welfare (Spicker, 2000, p. 9). Thus, his argument against privatization rests on the belief in the superiority of collective over individual action, with collective action given the trope of “the State.”

This side trip through classical and new forms of liberalism was intended to illustrate their political reasoning. The classical liberals sought to put into practice the privileging of the market over the State, the economic over the social, and so on. Their rationalization legitimated the governance of individuals in such a way that their so-called natural freedoms were privileged. The new liberals, however, sought to put into practice a welfare state

that protected individuals from flaws in the market. The governance of individuals was done by balancing individual liberties with a social net that protected them in cases in which their liberties caused them too much harm. In both cases, they rationalized governmental action in different ways, by rendering reality differently, and they affected social life very differently (one, for example, would justify child labor; the other would justify laws against it). And it is in this way, as political reason, that we may reconsider what neoliberalism is, that is, what is actually “neo” about it.

The key aspects of what is generally seen as U.S. (and likely British) neoliberalism, which has been exported globally, is deemed as having its origins in the ideas of the Austrian economist Friedrich Hayek, and particularly in the work of the economists at the Chicago School of Economics, such as Milton Friedman and mostly Gary Becker. Becker, I think, is the best figure of American neoliberalism, but not because he promotes free markets—most economists do that—but because of the ways in which he recharacterizes social life as economic. Anyway, it is generally understood that the 1980s, with the ascendance of Prime Minister Margaret Thatcher in Great Britain and President Ronald Reagan in the United States, provided the watershed moments for neoliberalism, although neoliberal rumblings probably began after World War II, even in the face of great prosperity (i.e., for U.S. businesses, of course) because of Keynesian (state interventionist) policies, with a (baseless) fear of such policies (see Galbraith, 1962, p. 1).

The “neoliberal turn,” as Harvey sees it, entailed powerful ideological influences after World War II, which circulated through corporations, the media, and the numerous institutions that constitute civil society, such as universities, churches, and professional associations. There was, first, a concerted effort to change mass opinion in favor of neoliberal ideas, and second, once state apparatuses made the neoliberal turn, they could use their powers of persuasion, cooptation, bribery, and threat to maintain the climate of consent necessary to perpetuate the reach of these ideas (Harvey, 2005, p. 40). What Harvey’s logic presupposes, again, is that neoliberalism is an ideological attempt to free the market from state interventionist policies (in order to consolidate power for a few elites), that it manifests itself in particular kinds of practices (e.g., deregulation, elimination of welfare provisions), and that the effectiveness of these practices is dubious (see also, for example, Nick Moore, 1997). But the logic of neoliberalism is not that it promotes free markets, but that it applies market logic to *all* areas of life (see Engelmann, 2003, p. 2).

I mentioned earlier that Gary Becker, a Chicago School economist and winner of the 1992 Nobel Memorial Prize in Economic Sciences, is the key figure of U.S. neoliberalism. He has taken economic rationality to

its radically logical (or illogical?) extension. In Becker, the social becomes the economic, and economic reasoning becomes social theory, with all the universality and encompassing rationality that comes with it. He argues that those who suggest that economics is different from the other social sciences, and that economists are able only to address economic phenomena, are merely reflecting a “reluctance to submit certain kinds of human behavior to the frigid calculus of economics.” Essentially, this kind of positivism allows Becker to conflate core differences between fields of knowledge into a single methodological approach intended for allocating scarce resources when there are competing ends, and any argument to the contrary he dismisses as irrelevantly psychological or moral (i.e., resistance to frigid calculations) (see Becker, 1976, pp. 4–5).

I am not interested here in questioning Becker’s embarrassingly faulty assumptions about economic behavior (which, for him, is human behavior writ large).⁴ I am interested in his economic rationality:

Indeed, I have come to the position that the economic approach is a comprehensive one that is applicable to *all* human behavior, be it behavior involving money prices or imputed shadow prices, repeated or infrequent decisions, large or minor decisions, emotional or mechanical ends, rich or poor persons, men or women, adults or children, brilliant or stupid persons, patients or therapists, businessmen or politicians, teachers or students. The applications of the economic approach so conceived are as extensive as the scope of economics in the definition given earlier that emphasizes scarce means and competing ends. (Becker, 1976, pp. 8; emphasis added)

For Becker, economics (or perhaps it is more accurate to say “econometrics”) provides a comprehensive framework for understanding *all* human behavior, which is now defined as “participants who maximize their utility from a stable set of preferences and accumulate an optimal amount of information and other inputs in a variety of markets” (Becker, 1976, p. 14). He assumes rational action, which for him does not mean that people are always rational or that they seldom make mistakes, but that the great majority of people are more rational and make fewer mistakes in promoting their own interests than well-intentioned state officials (see Becker & Becker, 1997, p. 5). The reason that the economic approach has not provided equal insight into and understanding of *all* kinds of behavior, Becker argues, is “mainly the result of limited effort and not lack of relevance.”⁵

What makes his logic so radical is that it applies itself, literally, to all aspects of life, including death. In Becker’s economic reasoning, most deaths can be considered suicides because they could have been postponed if the person invested more time in prolonging her life (Becker, 1976, p. 10). If

even death entails an economic calculation, then it would follow that *all* other things can be considered in economic terms. For example, according to him, one can view slavery as an explicit market that trades and prices “human capital stocks” than simply the services yielded by these stocks (Becker, 1993, p. 9); or many poor parents would lend their children money to help them obtain further training if these parents could expect to get paid back later when they are old (i.e., they fear that children may not carry out their part of the bargain, especially because they often live far from their parents) (Becker, 1993, p. 22); or because groups with small families spend more on schooling for each child, we can know why the children of Japanese, Chinese, Jews, and Cubans parents do well (i.e., their families have a small number of children and spend more on their children’s education) and why the children of Mexicans, Puerto Ricans, and Blacks do not do as well (i.e., they have big families and so the education of their children suffers) (Becker, 1993, p. 23). This all-encompassing economic logic is really something to wonder at.

In Becker’s arguments, there appears no hint of a blush about the insensitivity to those with loved ones who have died because they were sick, or to those with loved ones who have committed suicide, or to the horrific legacy of slavery that has affected the economic chances of African Americans, or to the fact that poor people do *not* have money to lend their children (they might not be poor if they did!), or to the idea that any parent would fear their children not “carrying out their part of the bargain,” or to the cultural prejudices that circulate about different ethnic groups. In his arguments, there is no need to consider sociohistorical or political conditions that cannot be reduced to economic calculations, and which might shed serious doubt on the assumptions he requires in order to create the fantasies he subjects to his analyses. And so Becker can claim (I surmise, also without a hint of a blush), that if one can assume that discrimination of Blacks by Whites is in the latter’s self-interest, then the reverse must also be the case, that is, that Blacks also have a self-interest in discriminating against Whites (Becker, 1976, p. 17). I am not sure what markets he assumes in which this can be the case, but that is neither here nor there, for he simply conjures up a market in order to proceed with his brand of economic calculations.⁶

Jameson characterizes Becker as the quintessential postmodernist who now expresses explicitly what is actually the case in reality: that all of contemporary life is now subject to the logic of capital and commodification (see generally, Cullenberg, Amariglio, & Ruccio, 2001, p. 7). For Jameson, Becker conflates two fundamental identities: human behavior and the firm. In his model, there is no logical constraint on being able to reason about social matters in terms of econometrics; Becker calls forth what is essentially a

metaphor (the “market”) and returns to it as a literal, concrete form to justify his policies. This defense of the market, argues Jameson, really signifies something other than itself, for it is premised on an ideological fantasy of a consumer who buys into the idea of the market of which he himself is not a part, and it hides that it is really not about consumption but about state intervention (Jameson, 1991, pp. 269–271). The market for Becker, continues Jameson, becomes a model of social totality. The ideology of the market is the “Leviathan in sheep’s clothing; its function is not to encourage and perpetuate freedom but rather to repress it.” Market ideology, in other words, proposes freedom but is actually opposed to it—it assumes that individuals cannot control their destinies and that we need an interpersonal mechanism (i.e., the market) that can substitute for human hubris and replace human decisions altogether (Jameson, 1991, pp. 272–273).

Jameson’s arguments about Becker seem correct when the framework of ideology and capitalism are brought to bear on the matter. But seeing neoliberalism in terms of ideology or capitalist domination misses what is truly “neo” about it (Jameson, by the way, does not refer to “neoliberalism,” but his critique is very much like those who critique it). An argument about ideology and domination does not need to conjure up a neoliberalism (or even a postmodernism in Jameson’s case) to explain such imperatives.

Neoliberals, at first glance, appeal to classical liberalism’s political reasoning of a distinction between the State and the market, the State and society, the State and the individual, and so on. Indeed, Becker argues that he is a liberal in the classical sense, in that he follows the case for individual freedom and private enterprise made by Adam Smith, David Hume, and other 18th and 19th century thinkers (see Becker and Becker, 1997, p. 5). But on deeper reflection, neoliberalism does not follow classical liberalism at all. As Thomas Lemke points out, U.S. neoliberalism actually expands economic rationality beyond the traditional economic sphere and into the social sphere (Lemke, 2001, p. 197), thus eviscerating the liberal distinction between the market and the State, the economic and the social, the private and the public, and the collective and the individual. Economic rationality becomes an all-encompassing logic for understanding, evaluating, and governing social life. Social life is reduced to a series of markets, big or small.

For neoliberals, individuals are entrepreneurs of themselves. The actions of the State, nay, all human practices, are then recast as “rational” actions and judged accordingly (by “rational” one is to understand “conscious” and “intentional”). While the previous classical and new forms of liberalism are understood, and indeed relied upon, a powerful State as a protector of the market, which is where natural freedom lies (though the

new liberals were far less sanguine about such freedom), neoliberalism posits the State, not as a protector of some supposed natural freedom in a market separate and distinct from it, but as a market itself, part of the entrepreneurial and competitive behavior of economically rational individuals. And it is this behavior that becomes the basis for the technologies of administration both through the State and through schools, communities, families, or other collectives. Many leftist critiques have it wrong: the State as such is not as much undermined as it is reconstituted.

Neoliberalism does not rationalize a return to *laissez faire* but an active implementation of policies that enable markets to exist and that create them where they do not. All behavior is reconceptualized along economic lines, as calculative actions undertaken through individual choice. Choice is deemed dependent on a relative assessment of costs and benefits—investments—made in light of environmental circumstances. The power of the State is directed toward empowering such choice, for creating the conditions for entrepreneurship. And it will no longer address society's needs; individuals will bear responsibility for their own choices (see Rose, 1999, pp. 141–142). In terms of public policy, the conditions for entrepreneurship require, or so the logic goes, privatization, marketization, and deregulation, as well as the provision of an ample supply of skilled (and unskilled) labor, and the prohibition of anything that inhibits choice, as most critics correctly argue. But by focusing only on such policies, they fail to see how neoliberalism works in governing subjectivities—by, for example, restructuring the provision of security and making public support conditional on the demonstration of proper aspirations (Rose, 1999, p. 144).

The State as such is thus not rejected by neoliberalism. While it rejects the early modern notion of the State as exercising all-consuming control over its lands and people, it supports a notion of the State that enlists its subjects, now elevated to the status of citizens, as participants in their own governance, shifting the locus of control internally. Neoliberalism thus seeks to transform the State from a logic of command and punish to one that educates, informs, persuades, and discourages (see Baldwin, 2003, p. 106). Neoliberalism defines positive tasks for the State, such as that of constructing the legal, institutional, and cultural conditions that will enable entrepreneurial conduct (see Burchell, 1996, p. 27). As Hayek argued, the

attitude of the liberal towards society is like that of a gardener who tends a plant and in order to create the conditions most favorable to its growth must know as much as possible about its structure and the way it functions. (Hayek, 2001, p. 18)

Neoliberalism—the U.S. and perhaps British versions—does seek to undermine the welfare state, but not because it is opposed to government. The welfare aspects of the State must be eliminated because they are seen to thwart individual choice and entrepreneurship. The State must now encourage and facilitate—sometimes force—the creation of as many quasi-markets as possible (see generally, Dean, 1999, p. 58). The discourse in the United States and in other liberal countries centered on the “culture of poverty,” “welfare dependency,” and other similar rhetoric against social welfare policies, are recast as leading to a “welfare-state mentality.”⁷ Becker contends, for example, that the best way to help children on welfare is to limit how long their parents can be on welfare, “for prolonged exposure creates a welfare mentality so that parents and children become habituated to depending on the government for support.” Welfare policy, therefore, should penalize those mothers who do not act responsibly by, say, refusing to send their children to school or not getting regular health checkups (Becker & Becker, 1997, p. 93). (The possibility that these mothers or their children might often be too sick for school because they cannot afford adequate health care seems to escape him.) As Mitchell Dean points out, the economic state of dependence is now linked to the moral-psychological state of dependency. But it is important to note that this is not entirely ideological rhetoric; it is a crucial rationality, so the logic goes, for administering the poor and creating entrepreneurial citizens (Dean, 1999, pp. 60–64).

The governmental rationality subtending neoliberalism is an attempt to encourage responsible behavior and to discourage its opposite. It does not assume this will happen automatically; it assumes that this must be enticed (and in some cases, forced). Classical liberalism linked its governmental reasoning to presupposed naturally existing free individuals, but neoliberalism does not presuppose that freedom is natural; it arranges for and contrives the autonomous, entrepreneurial, and competitive conduct of economic-rational individuals (see Burchell, 1996, pp. 23–24). According to Becker, for example, people will become thriftier and more self-reliant and develop other good habits when they are forced to provide for themselves (Becker & Becker, 1997, p. 95). Neoliberalism, according to Andrew Barry, Thomas Osborne, and Nikolas Rose, thus rejects the kind of naturalism inherent in liberalism and offers up a constructivism, so that governmental practices must actively create the conditions within which entrepreneurial and competitive conduct is possible. Thus, despite the anti-State rhetoric one encounters in, say, Becker’s writings, neoliberalism has justified the invention or deployment of a whole array of organizational forms and technical methods to get us to see and govern ourselves in terms of personal autonomy, enterprise, and choice (Barry et al., 1996, p. 10).

One can see, then, that state institutions now have a different role to play in such inventions, contrivances, and arrangements. The school, for example, is transformed into a venue for the promotion of an economically minded society through the invention of the “self-realization” of students (see Hunter, 1996, p. 149). But it is not just the school that must be transformed in neoliberalism. Social scientists and other experts (e.g., doctors, psychologists, judges, social workers, etc.) also have new roles in neoliberal governmentality and must govern differently than under other forms of governmentality. They must no longer serve the imperatives of discipline or simply be the functionaries of the State; they now also (perhaps primarily) provide information (e.g., risk assessment) that enables individuals and providers of social services to govern and assess themselves (see Rose, 1999, p. 147).

To possess the kind of knowledge required for self-reliance, one would need information and methods of calculation. Enter the role of information, statistical reasoning, and databases. Indeed, neoliberalism requires databases or other information technologies to guide decisions in the marketplaces contrived by it (see Harvey, 2005, pp. 3–4). Neoliberal rationalities have particular uses for such technologies in increasing the quantity and rapidity of the flow of information across great spaces and without the need to deploy an extensive system of (physical) surveillance by the State (see Barry et al., 1996, pp. 14–15). Neoliberal practices only become effective when individuals are able to reason and calculate their freedom. Neoliberal rationality thus requires a numerical environment in which these autonomous choosers will govern themselves via probabilities and risk analyses. To make sense of this numerical environment, they must be taught mathematics in the education system, and they will have to depend on particular probabilities and risk experts and their techniques: economists, accountants, statisticians, demographers, as well as censuses, surveys, national income tabulations, formulae, accounting practices—anyone and anything that renders existence numerical and calculable (see Rose, 1999, p. 230).

Neoliberalism’s logic, to stress again, is not to undermine the State as such, but to reconstitute it as a creator and facilitator of numerous little markets, if you will, and as supporting the tools necessary for functioning effectively in such markets, such as mathematics education. In other words, neoliberal projects seek to transform the role of the State from one that protects individuals to one that facilitates a slew of specialized private and quasi-public, governmental and communal, markets for providing social services, and—this is a key point—it is to be judged as a market itself. The State is thus not rejected simply because it is the State and because neoliberalism is inherently opposed to the idea of the State. Instead, the State is

reconstituted and judged under different criteria, namely, the rules that govern the entrepreneurial and competitive behavior of economically rational individuals. These rules, by the way, often take the form of the quantitative and quasi-quantitative models of rational decision-making. They shift the style of control of the provision of social services from a “command and control” mode to a “coordinate and evaluate” management style, and so practices like budgets, audits, and other modes of accountability now become central to this shifting role of the State, a phenomenon with which I will be concerned in the next chapter of this book.

Leftist critiques of neoliberalism are correct that the welfare state is undermined, to be sure, but only because it does not act as economically rational and thwarts the development of self-reliant individuals, so the logic of neoliberalism goes. So it is sometimes economically rational to have the State intervene in a market that has now been reconstituted to incorporate all that had traditionally been understood as distinctly social, psychological, political, moral, or cultural (but now all defined as economic), such as, for instance, requiring accountability for particular standards, even if it should not intervene directly in the “market” of social services (e.g., to ensure that everyone with a preexisting condition has access to health care). The critics of neoliberal practices certainly understand the movement toward entrepreneurialism in the provision of social and public services in the United States and elsewhere, and they correctly point to its problems in terms of social equality, but I think they attribute to neoliberalism an improper motive: the undermining of the State (or the public, or democracy, which are all conflated with the State). The welfare state is rejected in neoliberal rationalities because it is seen as thwarting its real objective: the creation of self-reliant individuals who will see the entire world in terms of entrepreneurial opportunities. And so the actual target of neoliberalism is the individual, not the State, for targeting and modifying the individual’s behavior is considered more efficient for governing the population, a point I elaborate upon in the next section.

Individual

Harvey quotes Margaret Thatcher as saying, “Economics are the method, but the object is to change the soul” (Harvey, 2005, p. 23). Not all economics seek to change the individual’s soul, but Thatcher was referring to the predominant mode of economics, one informed by neoliberal rationality (probably Hayek’s). The target of neoliberal governmental rationalities is the individual. There can be no question that the welfare state is undermined by many neoliberal practices, and this practice is adequately ac-

counted for by most of the critics of these practices. Spicker, for example, correctly points out that economists who apply market logic to state services fail to understand the distinction between states and markets (a distinction that is a remnant of the classical and new liberalism, as I discussed above). States, in Spicker's argument, are not always motivated by costs and profits but by the need to provide services that the market does not provide; their logic is protectionist, and they cannot be expected to be efficient in a cost-benefit kind of way (Spicker, 2000, pp. 167–170). This critique rings true but is not on point.

It is not quite the case, as I have argued already, that the logic of neoliberalism is to undermine the State as such. The State is not so much undermined as much as it is given new functions. Its ability to intervene directly in the conduct of individuals is constrained under neoliberal logic, to be sure,⁸ but it now becomes a facilitator of a slew of specialized private and quasi-public techniques for “conducting” the actions of individuals without being responsible for them (see Rose, 1996, p. 56). The responsibility for traditional state functions, such as its social welfare services, is increasingly shifted downward, to rationally acting individuals and collectives (e.g., families, associations, communities, etc.), and the rationalities of administration by these collectives will dedicate themselves to producing self-responsible individuals who are economically rational.

The individuals these neoliberal projects conjure up will bear the moral and political freedom to care for themselves, but also the fiscal and political responsibilities for the risks their freedom incurs. As Hayek argues, in “freedom,” the individual has both the opportunity of acting on his choices, but he must also bear the consequences of his actions, “Liberty and responsibility are inseparable” (Hayek, 2006, p. 63). The justification for assigning responsibility is that it aims at teaching people what they ought to consider in comparable future situations. Responsibility thus presupposes rational action, that is, that people will learn from the consequences of their actions (Hayek, 2006, pp. 67–68). To the extent that neoliberalism's objective is the creation of self-responsibility in individuals, therefore, its undermining of the welfare state can now be seen as a necessary condition for putting its objective into practice: It must “free” the individual from his ties to such a state because these ties thwart its objective, to make the individual autonomous, self-reliant, and self-responsible. That the validity of claims that welfare provisions create dependency is dubious is beside the point. I am interested in its logic, not its veracity. This logic would have it that an individual is not a natural entity, as classical and new liberals believed; she must be invented, enticed, convinced, educated, and directed to act autonomously so that she can take care of herself. Thus, one can see that in

this regard, neoliberalism meets with and has affinities to behaviorism (see Lemke, 2001, p. 200).

At any rate, neoliberalism works on the individual's autonomy to reinvent social life as economic: first, by making all behavior subject to a cost/benefit analysis (behavior is converted into "human capital," which I will discuss in more detail in the concluding section of this chapter); second, by rationalizing particular kinds of local and national interventions for ensuring individual autonomy and self-responsibility; and third, by establishing "rational choice" as the description of reality, a reality in which meaningful existence requires producing and enhancing one's capital. Neoliberalism, therefore, as Graham Burchell explains, extends the model of rational-economic conduct beyond the economy itself, generalizing it as a principle for both enticing individual behavior and limiting governmental intervention (Burchell, 1996, p. 27).

This rationality converting the social into the economic thus reworks social and political commitments. If all social life is to be understood economically, then the social domain, like the economic one, is governed by the "rational choices" of entrepreneurial individuals who see everything they do in terms of maximizing their "human capital," and social life is to be judged under such logic. Education, health care, labor, professional development (but even marriage, having kids, buying a house—anything) are reconstituted as means for creating capital for (and from) oneself.⁹ This also means, I must keep stressing, that individuals will be enticed to exercise greater "freedom" to pursue their entrepreneurial interests, but consequently, they will bear all the fiscal, political, and moral responsibility for caring for themselves. The state can and should no longer insure them against the risks freedom poses for them. Since individuals must care for themselves, their commitments will reflect this need to "invest" in themselves as much as they can and wherever they can. Their relationships with other individuals, with the State, and with the institutions that had previously shaped their lives for other than economic reasons, such as the family, the school, the church, the community, associations, and so on, will all be reconstituted to promote these investments. The socialization of the individual must be transformed (in schools, in the family, etc.) to match this new economic freedom she is now supposed to exercise (and which, by the way, she must come believe to be the only real kind of freedom there is).¹⁰

The school is a particularly important institution for neoliberal objectives seeking to transform individuals into self-reliant citizens, as I have suggested before. And as the infamous report, *A Nation at Risk*, indicated, "Learning is the indispensable investment required for success in the 'information age' we are entering" (National Commission on Excellence in

Education, 1983, p. 8). Investment here refers not only to public funding but to individual behavior, and the reason for focusing on the school is that it entails the use of ideologies and pedagogies already directed at forming notions of citizenship in children, and so there is less need for direct state coercion. With regard to primary and secondary schooling, controlling children's behavior is geared toward "empowering" them to "feel it is their right to have control of their own education." That is, children will need to "learn to take risks, to 'think outside the box,' not simply to perform obediently the often mundane, repetitive tasks asked of them in our schools today" (see Nordgren, 2002, p. 320).

With regard to postsecondary education, what individuals need to see is that they are investing in their economic futures, and they will learn self-responsibility by having to pay more and more for such investments. So the arguments that neoliberalism converts higher education into a so-called private good to the detriment of the individual miss the key point in all this: what is being targeted by such conversion of "goods" is not necessarily the State or the undermining of public services but the individual's self-governance—making students pay for their higher education is a technology for creating particular kinds of citizens. Thus, the educational system as a whole—that is, the primary and secondary schools, postsecondary institutions, and perhaps all kinds of continuing education—must be restructured to prepare individuals for the global market that is assumed to exist, or which will exist by reworking (inter)national policies. The task of the education system is to create different kinds of citizens, ones who govern their own behavior, depend less on state resources, and thus become more "collaborative," "flexible," "prudent," and so forth.

This kind of citizen, of course, needs more than just different forms of socialization. He needs particular kinds of information in order to make his calculations about investments and risks. Continuing with our brief discussion of the school, for example, we can now reframe the emphasis on standardized tests in educational systems in the United States. Not only does taking such tests inculcate particular kinds of reasoning and forms of conduct—numerical reasoning and the self-discipline that is required to do well on such tests—but they offer a necessary kind of information for the calculating individual and the society of the statistic. The publication of test scores, for example, allows the individual and the community to govern their own conduct and that of the school's in ways intended to increase those scores. "Education" is now understood in terms of these test scores instead of previous, more esoteric notions, and because the individual and the community now have an important kind of numerical knowledge about education, they can police their schools more directly than can the State

itself. Standardized testing, then, is a technology for generating information that allows governing at a distance. In other words, testing provides the kind of political knowledge necessary for justifying the governing of schools, and of individuals in schools, through national performance standards administered locally through school districts, the community, the family, and, especially, the individuals themselves.

The critiques of neoliberalism as thwarting freedom or agency fail to account for how neoliberalism works by acknowledging that freedom and agency, albeit by reducing them to monistic notions of self-interest. But such monism allows neoliberal projects to invent and make use of a subject that can more easily be inserted into the broader economy. Freedom is thus not a premise of government but an effect of a particular governmental rationality, one in which, primarily, individual interests count. Freedom is not a moral or juridical construct; it is one of efficiency. As Hayek argues, “Our faith in freedom does not rest on the foreseeable results in particular circumstances but on the belief that it will, on balance, release more forces for the good than for the bad” (Hayek, 2006, p. 28). The logic here is that in modern liberal societies, it is more efficient to allow individuals to make their own decisions than to control or coerce them. The freedom of the individual to pursue all kinds of investments in his life, therefore, is itself a mode of government, one that deploys freedom and rational choice as its agents (see Engelmann, 2003, pp. 5–6). As Stephen Englemann argues, the economic reasoning demanded of citizenship in neoliberalism may be reductionist, but it is very demanding. The good economic actor has to calculate all alternative means and ends while understanding the probable consequences of her actions (i.e., ones that will further or hinder those means and ends), and all this must be considered against an understanding of the available resources and the probable effects of actions upon those resources. This economic reasoning entails a kind of critical self-consciousness, however parodic (or, I would add, unrealistic or impossible) it might be (Engelmann, 2003, p. 7).

Neoliberalism, it must be stressed again, conjures up the notion of the enterprising self, one that sees itself as free, self-responsible, and ready to take risks. This is a self that is crucial to the larger political projects of promoting the goals of self-responsibility and the self- and communal provision of social services (with the help of experts), as well as the measurement of the effectiveness of self, communal, and State governing in terms of how well these other goals are accomplished. Thanks to the logic of marketization and privatization, the readiness for risk and utility maximization ostensibly promote not only individual but national happiness (see Bröckling et al., 2011, p. 15). But having said all this, neoliberal projects are not always

in favor of promoting freedom for all; in some cases, as I have argued in previous chapters, the freedom of some must be curtailed for the good of the order. Thus, neoliberal projects may be dominating or “liberating,” depending on their specific targets, objectives, and the social effects they may inadvertently wind up generating, for these projects often fail to hit their mark, so to speak.

Barbara Cruikshank seems correct when she argues that individuals are transformed into particular kinds of citizens by technologies of citizenship, which now include all kinds of discourses, programs, and other nonstate tactics aimed at making individuals politically active and capable of self-government (Cruikshank, 1999, p. 4). These technologies also create forms of citizenships in which the individuals are to think of social relations in terms of investments. Clearly, this has dominating tendencies, since it may undermine the ethical commitments individuals make to each other, and in giving people autonomy, some will inevitably fail to conform in some way and be punished accordingly. One example might be how home buying has been transformed by such technologies of citizenship. Home buying is often couched as a form of investment, rather than, say, the American Dream. But couching it in such terms does not come without a concurrent transformation of one’s ties to the community in which the home is located. And so the community can be discarded easily if the investment does not pan out. There is something governmental to wonder about, then, in the idea of “flipping a house.”

The point here is that “empowering” technologies can free individuals from some of the oppressive rationalities that have governed their lives previously (e.g., totalitarian states, religious orthodoxy, sexism, etc.), although they also can sever commitments to particular communities, which, ironically, appears to thwart some neoliberal attempts at fostering such commitments in lieu of those to the welfare state (as in the case of fundamentalist groups).¹¹ These technologies, therefore, are neither good nor bad per se, for the “will to empower contains the twin possibilities of domination and freedom” (Cruikshank, 1999, p. 2).

To conclude this section, the rationality behind neoliberalism is the promotion of freedom in order to ensure self-government, which is viewed as more efficient for governing a population than direct coercion and control by State authorities. Even when coercion, exclusions, and the exception must be used, these too are driven by the overall goal of enabling self-governance, and thus such practices are guided by a paradoxical relationship to freedom—to protect freedom, we must deny it to some who cannot exercise it correctly. It is entirely accurate to say, then, that there is a “return to the individual” in neoliberalism and that it serves the imperatives of capi-

talism (see, for example, Bourdieu, 1998, p. 7). But neoliberalism's return to the individual is foremost a strategy of governing in liberal societies. It justifies shifts in the provision of social services, moving it downward to the individual, the community, or some other non-State collective. This logic is perhaps premised in the United States, following Cruikshank, on the limits and politics of the welfare state, the failures of American democracy, and upon the State's inability to control conflict. The logic here, however, is that what makes us democratic is that we care for ourselves and for our own (with the help of experts, of course) (Cruikshank, 1996, p. 232). Before ending this chapter on the economy as a mode of government, one concerned with individual subjectification for the governance of a population, I want to elaborate upon a topic I mentioned briefly but have yet to fully develop: the notion of human capital.

Capital

I conclude this chapter on the economy as a mode of government by discussing one of the key technologies of government via the economy: the notion of human capital.¹² It is the logic of empowering individuals that seems to make human capital theories so powerful in contemporary politics, especially in the United States. Indeed, its pervasive use in the United States is what makes American neoliberalism different from the forms it might take elsewhere, such as in Germany (see generally, Lemke, 2001, pp. 192–196). Becker is often associated with human capital, but it is more accurate to say that he was the first to give it significant purchase (no pun intended) within his neoclassical pretensions.¹³ It was, however, Theodore Schultz who first coined the term “human capital” in his microlevel view of human activity, which he represented as the “rational choices” of entrepreneurial individuals who see everything they do in terms of maximizing their self-investments (embodied in knowledge and skills) in order to maximize their income. According to Schultz, it is by “investing in themselves [that] people can enlarge the range of choice available to them. It is one way free men can enhance their welfare” (Schultz, 1977, p. 314).

But, as I indicated above, the theory of human capital was given purchase in the United States by Becker, which he claims arose from an understanding that there was “substantial” growth in income after the growth in physical capital and labor had been accounted for and from the recognition of the idea that education was important for economic development (Becker, 1993, p. xxi). So human capital entails for Becker all the activities one engages in order to produce income for oneself, both in terms of money and consumption, the latter which he redefines as “psychic income.”

These activities include schooling, on-the-job training, health care, migration, searching for information about prices and incomes, and so forth. Not being concerned with other methodological approaches (i.e., noneconometrics) or possible frameworks (e.g., cultural capital), for Becker, the most important piece of evidence in favor of the theory of human capital is that highly educated and skilled people almost always earn more than others, and thus economic inequality is really an effect of the lack of human capital (Becker, 1993, pp. 11–12).

The magic of Becker's theory of human capital is, yet again, the way he transforms a theory dealing with a narrow range of activities (while also assuming a great many things) and extrapolates it not only to the level of the entire field of economics—"My discussion follows *modern economics* and assumes that these investments usually are rational responses to a calculus of expected costs and benefits"—but to that of social theory—"human capital helps in understanding a *large* and *varied* class of behavior."¹⁴ There is also no distinction worth making between schools and firms, for "schools can be treated as a special kind of firm and students as a special kind of trainee" (Becker, 1993, p. 52). His model of human capital assumes that actual conditions are the same as optimal ones, that all persons are rational, and that neither uncertainty nor ignorance prevents them from achieving their goals. He acknowledges that this model presupposes too much, but believes that "it is instructive to determine how far even a simple model takes us." All right, but after even acknowledging the limits of his model, he goes on to say that it can be "easily generalized to incorporate many of the considerations neglected" (Becker, 1993, p. 119). It can so generalize what it cannot consider by recasting those things in terms of its logic (e.g., discrimination becomes an "investment," and only investments are included in the model). In other words, the weakness of the model is its strength—it can recast or ignore all that does not suit it.

The logic of human capital is seemingly premised on theories of behaviorism, or human agency, or perhaps even a radical extension of the figure of *Homo economicus*.¹⁵ Regardless, it has become a powerful rationality for governing individuals and the provision of public services, especially education. Jerome Karabel and A. H. Halsey are probably accurate that human capital theories appeal to procapitalist ideological sentiments that define the worker as a holder of capital (i.e., skills and knowledge) and which grant that worker the capacity to invest in himself. So they argue, "In a single bold conceptual stroke the wage-earner, who has no property and controls neither the process nor the product of his labor, is transformed into a capitalist" (Karabel & Halsey, 1977, p. 13). And Pierre Bourdieu is also probably accurate that such economism amounts to nothing more

than ethnocentrism, for its principles derive from capitalism and recognizes no other form of interests than those that capitalism has produced (Bourdieu, 1990, p. 113).

Yet the idea of human capital does more than create little capitalists of us all. Human capital is part of the processes of neoliberalism's reinvention of social life as economic, and it does this in a number of specific ways. First, it reframes human activities (e.g., going to school, getting professional development) as quantifiable "human capital." Second, once behavior is converted into a product, that is, capital, it can be subjected to a calculation about the costs and benefits of seeking that "product." Third, because in merely living, one now is always seeking capital, rational choice is established as an empirical description of what is actually a desideratum, an imagined reality in which meaningful existence requires producing and enhancing one's human capital. And last, it allows material investments in, say, education, or any other capital-enhancing "product," not just from the state but especially from individuals themselves, since, after all, they are the ones seeking to gain income. Human capital is therefore a key aspect of the art of neoliberal governing.

It is important to stress here as well that in saying that human capital is part of the art of government, we must see it as also geared toward the population. Yes, its specific target is the individual's subjectivity, but it is because there is in it a rationality that posits a need to create self-responsibility as the most efficient means of governing a population of individuals. Thus, human capital is oriented to the population, as governmental rationalities are. The *prima facie* individualist rhetoric in notions of human capital should not blind us to the fact that as an art of governing individuals, it is concerned with reproducing itself socially and politically over a more or less malleable space, understood physically as the territories of the State, of course, but also politically as the space of the population.

Along with subjectification, the notion of human capital comes with a criticism of uncontrolled growth of state apparatuses and the concomitant threat posed to individual liberties. Rational economic calculation becomes the principle for grounding and limiting government action, and with the State itself defined as a market, its tasks are to universalize competition and invent market-like systems for the actions of individuals, groups, and institutions—and it is judged accordingly, that is, whether or not it does this well (see Bröckling et al., 2011, p. 6). This criticism is premised on the idea that too much State intervention thwarts the creation of self-responsible citizens. The behaviorist orientation of human capital theories see the individual only in terms of his behaviors, which are then recast entirely as individuals (a) attempting always to maximize their self-investments, and

(b) attempting always to calculate the costs and benefits of acting in a certain way. There is no behavior that cannot be described in terms of such calculations. And therefore, to the extent that the notion of human capital rationalizes certain policies in support of its logic, it reveals itself to be normative, despite its supposed empirical justification and Becker's constant consternation over arguments about the morality of his theory (see Bröckling, 2011, pp. 258–260).

Critiques of the overreach of neoliberal concepts like human capital abound in leftist politics. The concern is that such economic logic (writ large) is going beyond economic questions and proposing that a theory of rational choice is applicable in noneconomic realms, such as, among others, religion, gift giving, suicide, substance abuse, marriage, and reproduction (see Amariglio & Ruccio, 1999, p. 387; see also Fine, 1999, p. 404). That such a theory is dubious even in the economic realm may be a logical critique, but the point is that the extension of economic logic into the realm of everything is part of what makes neoliberalism “neo.” The logic of human capital now extends to all kinds of behaviors and realms. Browsing the Internet about what car to buy can now be considered a form of human capital. Anything! In the field of education, the notion of “human capital” is thrown about so uncritically that it masks how we can become complicit in whatever negative effects such a notion brings with it.¹⁶ In bringing such a concept into our analyses of education (or indeed, any social phenomena), we fail to account for how economism works in the processes of government and how governmental rationalities work on our subjectivities to make such logic enticing and rational.¹⁷

When seen as part of the neoliberal governmental rationalities that reshape individual freedom in terms of self-reliance and self-responsibility, and which inculcates a calculating knowledge of judging one's existence, then human capital is a logic of subjectification in the art of government. Its logic works like this: Individuals are free and rational and only make decisions that will further their economic interests; they are continuously calculating the costs and benefits of their actions; they will (re)view the value of social services only in accordance with whether they actually gain income; and they will see social institutions (e.g., schools, communities, marriage, childbearing, etc.) as serving no other purpose but promoting the opportunities for self-investments, and they need not be supported if these services do not prove they can increase those opportunities.

Human capital ideas are thus surreptitious and insidious, with their unacceptable origins in neoliberal economics often overlooked. In the field of education, this is especially the case (see, for example, Perna & Titus, 2005; cf. Coleman, 1988). The uncritical use of human capital in social analyses

fails to recognize that “skills” have been reconstructed as part of physical-like capital, and that the “return” on those skills is not taking place in a perfectly working labor market (see Fine, 1999, p. 413). The notion of human capital has serious consequences for self-government in two ways. First, at its roots it rejects social welfare policies that might increase educational funding and shifts the “investment” in education downward to individuals and families, forcing students to choose majors that reinforce the logic of rational choice as a self-fulfilling prophecy (e.g., business, STEM, etc.). Second, and more important, in terms of our subjectivities, to the extent we are socialized into thinking that promoting human capital equals responsible citizenship, nothing will make sense to us outside of an overriding economic rationality. The commitments individuals will make to . . . well, anything, will become tenuous, a matter of investments and discarded if those investments do not pan out.

The notion of human capital is illustrative of an American neoliberalism that, as Dean argues, has so much confidence in market rationality that it extends it to all sorts of areas that are not, or not exclusively, economic. It employs the notion of choice as a fundamental human faculty that overrides all other social determinations—in human capital, the individual is entirely an entrepreneur of himself—and it thus radically inverts the idea of *Homo economicus* and proposes instead a form of “manipulable man,” so that the subject who calculates his interest must be enabled by certain conditions (e.g., forcing him to care for himself by making him pay for investments himself). And again, in this regard, neoliberalism works with behaviorism to the modify conduct according to market rationality (see Dean, 1999, p. 57). But it is important to stress here that while human capital does indeed justify, if not promote, economic inequality, its logic is that of working on the individual’s capacity to act, that is, it works on his freedom.

Thus, rather than deeming all neoliberal projects as necessarily dominating, we might attend to how they “work,” and I propose they work by understanding what motivates individuals to act (e.g., in liberal societies, they want not to be coerced by state action, and in the economic sphere, they want to have enough income to live happily), by enticing them here and thwarting them there, but all toward the objective of creating a population of self-reliant individuals who are constantly trying to promote self-investments. The notion of human capital can allow us to justify more public funding of education, if an economic argument can be made about the need to create better conditions for self-investments. And economic logic is what one hears in calls for more public investment in education. So there are ways in which a neoliberal idea like this can be made to work with regard to more progressive governmental policies.¹⁸ Many governmental practices

contain for individuals the twin possibilities of liberation and domination. So I do not want to say that all economic ideas are bad. I do want to say only that that they are dangerous, for in bringing economic concepts into the analyses of social and cultural phenomena, even if intended to further democratic goals, we inadvertently “put ourselves in danger.” Economic theories are powerful discourses in shaping reality, and as such they play crucial parts in the art of government, which are always seeking to co-opt the technologies of self-government in order to redirect them toward larger political objectives.

I am leery of critiques of neoliberalism that purport to save us from its ideological hold on us. The point of critique in governmental analytics is not to put oneself in the service of those who purport to know better, but to offer resources to those who have been constituted as subjects of administration by others and who are entitled to “contest the practices that govern them in the name of their freedom” (Rose, 1999, p. 60). But it is important to be leery of *not* being critical of economic theories like that of human capital. These theories should not be made easily translatable into other fields, for with such translations come forms of power that work by anchoring particular kinds of subjectivities and ways of governing others, and more importantly, they seek to foreclose avenues of alternative forms of self-government.

Notes

1. For example, we are warned against the power of the “corporate technoelite and high priests of the information revolution”; see McLaren, 1999, p.16; see also Harvey, 2005, p. 19.
2. See Keen, 2004, p. 26. Bentham serves not only to justify a philosophy of an unfettered market, but he also proposed that pleasure and pain can be objectively measured, allowing neoclassical economists to erect complex mathematical models of human behavior that purportedly say something not only about individual behavior but about society itself.
3. Adam Smith, arguably, was less enamored of the market than the other classical liberals. See generally, Copley & Sutherland, 1995.
4. For example, Becker assumes, among other things, that markets create behavioral consistency in all different kinds of individuals; individual preferences do not change substantially over time; the preferences of the rich and poor are not different; prices reflect individual desires and coordinate their actions; “prices” exist in both market and nonmarket situations (in the latter they are “shadow prices”); market equilibrium is an appropriate assumption for economic calculations; when information is “incomplete” for someone, it is because it is too costly to acquire; there are no conceptual distinctions between major and minor decisions (e.g., between those of life and death and those of buying coffee, between those of having children and those of buying

- paint, etc.); and economic claims can proceed from an assumption about a perfectly competitive system. See generally, Becker, 1976, pp. 5–8.
5. Becker, 1976, p. 9. His logic is exceedingly popular in many neoliberal and neoclassical economists' attempts to extend their analyses beyond traditional economic subjects, but interestingly, they often fail to extend such logic to their own social positions. Becker argues, for example, that an increased demand by different interest groups or constituencies for particular intellectual arguments and conclusions would stimulate an increased supply of these arguments (p. 11). According to this logic, his arguments exist only because certain interest groups benefit from them, not because there is anything inherently insightful or useful about them. In other words, he fails to consider the market for his own arguments, which he proposes is a logical step for considering all other human behavior.
 6. His conjuring up of markets allows him to oppose, among others, policies promoting "big government" and central planning, illegal immigration, quotas and set-asides for minorities, union exemption from antitrust laws, highly subsidized tuition for middle- and high-income college students at state universities, the NCAA restrictions on paying college athletes, term limits for Congress, employee stock option plans and other subsidies to employee ownership of companies, and tariffs. He supports selling the right to immigrate legally, extensive privatization of public enterprises, school vouchers, legalizing many drugs, substituting an individual-account system for the pay-as-you-go social security, fully voluntary armed forces, cracking down on deadbeat dads, enforcing marriage contracts and prenuptial agreements, free competition among religious sects and denominations, renewable federal judiciary terms, strong punishments for serious crimes (especially if guns are used), and changing welfare to concentrate on helping children rather than mothers or social workers. See Becker and Becker, 1997, p. 6.
 7. Democratic President Bill Clinton in the 1990s in the United States was a key figure in altering the provision of welfare for poor people using this logic. In my opinion, he is the quintessential neoliberal (but not neoconservative) politician—and Democratic President Barack Obama also appears to me to be neoliberal—so perhaps it is useful to distinguish neoliberalism from neoconservatism, which are often conflated in leftist discourse. Both rationalities share the same diagnosis of the problem of the dependency on the State, and perhaps of other forms of corruption (e.g., homosexuality, abortion, illegal immigration, etc.), but neoconservatism is much more likely to resort to State instruments to enforce its rationalities, while neoliberalism seeks to reform ever-new spheres of social life to make them accountable to the imperatives of the learned rules of markets. See Dean, 1999, p. 163.
 8. I think I should remind the reader that I speak of rationalities, but not of whether actual practices are effective in furthering those rationalities. Their effectiveness would be an empirical matter, but my concern here is with governmentality, as I explained in Chapter 1.
 9. One sees such logic in the healthcare reform in the United States, in which such reform is justified by President Barack Obama as not only morally right but as sound practice for people to achieve their economic well-being.

10. Some poststructuralist scholars find some comfort in such reductionism of individuality to an economic rationality, arguing that while neoclassical thought (which, I think, is simply the economics version of neoliberal logic) dispenses with the essentialist and hegemonic notions of agency in traditional liberal thought in favor of an agency that manifests itself in discrete and distributed forms of behavior (see Amariglio & Ruccio, 2001, p. 150). I find such arguments stretched. While I agree with their claims about the essentialism in traditional liberalism, I find the logic of the always-maximizing individual in neoliberalism not less essentialist, and its reduction of freedom to economic behavior is actually more foundationalist in nature, for its all-encompassing logic does not permit any other logic for making sense of or practicing freedom.
11. I think one example of this is the right-wing and fundamentalist movements that seem to be springing up in most liberal countries. Some neoliberal projects promote notions of community in order to undermine individuals' commitments to the welfare state. But this comes with a concomitant and unintended undermining of individuals' commitments to larger political concerns. For these right-wing and fundamentalist movements not only resist social welfare policies but also the neoliberal objectives of creating economically rational citizens, a phenomenon figured best in the United States with the influence of, and resistance to, "Tea Party" extremists.
12. Michael Perelman argues that the term "human capital" is wonderfully ambiguous, mixing the idea of "human" with that of "capital," which he calls an inhuman concept. So, he asks, "Does this humanize capital or dehumanize humans?" See Perelman, 1998, p. 86.
13. Becker indicates that the increasing use of the notion of human capital is testimony to the fact that this is not a fad, to the fact that it closely integrates theoretical and empirical analyses, and to the excitement that will be generated by studies of its effects in the nonmarket sector (see Becker, 1993, p. 10). Of course, such logic does not acknowledge its own possibility, that is, the discursive formations in the creation of knowledge, and to the possibility that human capital has become a paradigm in economics, and as such, it seeks to ward off challenges to itself, as Thomas Kuhn has instructed us is the case with paradigms in the physical sciences (see Kuhn, 1970).
14. Becker, 1993, p. 17 (emphasis added). He states later, "An important attraction of this theory is that it relies fundamentally on maximizing behavior, the basic assumption of general economic theory" (p. 149). But not all of economics functions under the logic of rational choice. The neoclassical school from which Becker comes is dominant, but economics also includes other kinds of schools, which, although more marginal than neoclassical economics, are nevertheless "there" (e.g., neo-institutional economics, Marxist economics, post-Keynesian economics, evolutionary economics, chaos theory economics, feminist economics, etc.). The point here is that as much as he conflates economic behavior with all other kinds of behavior, he also conflates all of "modern" or "general" economics with neoclassical economics. It really is a testament to the power of this paradigm and indirectly to that of the

- economic interests it furthers, that such self-serving, overstated, and empirically shoddy claims have held sway for so long in the United States.
15. For well over 100 years, *Homo economicus* has figured in mainstream economics, standing for self-interest, egoism, competition, and pleasure-seeking; *Homo economicus* “reared in the Cartesian nursery, nourished by a diet long on atomism and short on empathy, has generally been treated as a rather transparent agent” (see Feiner, 1999, p. 193).
 16. I have discussed the uncritical use in the field of education of “capital” notions, such as “social capital,” “human capital,” and “cultural capital.” For interested readers, see Musoba & Baez, 2009).
 17. I have a theory about why many in the field of education uncritically use ideas from economics. With human capital, there is some affinity, since such ideas make education central. But the field borrows concepts uncritically from other fields that are deemed of high professional status, which is certainly the case with economics. The low professional status of educational researchers in the overall social sciences tends to lead to a borrowing of a higher-status field’s concepts, which means there will be a resistance to critical reading, a reification of the concepts borrowed, and an insular thinking with a proclivity toward self-citation that is typical of attempts at gaining professional status.
 18. Indeed, one may say that neoliberalism has saved affirmative action by converting the debate from irresolvable moral questions of social justice to ones of educational outcomes, such as that affirmative action is necessary for creating a diverse global workforce. It is with the latter arguments that the University of Michigan was able to justify its affirmative-action policies. See *Grutter v. Bollinger*, 539 U.S. 306 (2003).

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6

Accountability

University

In 2008 and 2009, we all endured in my college accreditation reviews by the Florida Department of Education and the National Council for Accreditation of Teacher Education, and these reviews occurred within the context of my university's review by the Southern Association of Colleges and Schools, whose external reviewers were due to visit within a semester of the other two reviews. We had also been subjected around this time to the graduate school's "Carnegie" style review of our doctoral programs in education, as well as the university's 7-year cycle review of the entire college's programs. The latter two were not accreditation reviews, but they used the same logic of requiring large amounts of quantitative information (considered the only significant kind of "data"), visits by external reviewers, the completion of reports—self-reports, external reports, and responses to reports—and the same rhetoric about formative evaluation and improving programs (which in my opinion is subterfuge for the fact that these processes could at any time become summative and because of the fact that the notion of formative evaluation implies a kind of agency that we really did not have).

As a result of all these accreditation and related reviews, many of us in my college were experiencing “accreditation fatigue,” frustration, anger, and panic—a structure of feelings¹ exacerbated by the recent specter of program eliminations associated with budget cuts made “necessary” by poor economic conditions in the state of Florida (or so we were told by very highly paid administrators). I did not believe any of this, by the way. If what was said about economic conditions were true, our board of trustees would not have approved that our previous president retain his \$500K salary for 5 years, or the hundreds of thousands needed to rename the main campus in his name after he left the presidency, or the millions allocated to the new football team and medical school, or the ballooning of an administrative apparatus that at one time could be represented by the ratio of 1 administrator for every 1.2 faculty members. Despite the fact that these budget cuts resulted in the elimination of programs for which we were still required to provide a so-called formative review for purposes of the review processes mentioned above, we were afraid that a negative review would result in the closure of other programs. Interestingly, these program reviews for the purposes of program elimination also required the same kind of quantitative data, reports, and “external” reviewers (this time from outside the college in the form of faculty committees established by the Faculty Senate). For all these reasons and more, we were fatigued and greatly panicked—and I know from other colleagues at other universities that our fatigue and panic were not simply a local matter. These reviews are becoming endemic to the way universities operate and to the structure of feelings that arise from neoliberal rationalities that reframe our existence in terms of notions of risk, as I discussed in previous chapters.

Accreditation and related reviews are premised on actuarial rationality and are parts of the overall accountability movements in contemporary liberal societies like the United States. There seems little doubt to those of us who are philosophically minded that the logic of accountability has been narrowed to such levels that it essentially reduces what might otherwise be considered inherently unknowable things, such as teaching and learning, to things that can be put into a language of accounting, a language that lends itself to neat little matrices, which then become how we are judged, how we can speak of ourselves, and how we can understand ourselves.

As onerous as these reviews are, there seems little doubt to me that this logic of accountability amounts to nothing but a vain effort to try to, following Daniel Greenberg, “capture and weigh a fog” (Greenberg, 2001, p. 4). But when accountability is viewed from the lens of governmentality, we might say that it is a powerful way of governing at a distance, not only of the provision of social services, such as higher education (or research,

or public service, or whatever the “service” is deemed to be), or of the individuals served by these services, who must now understand themselves as calculating the risks associated with their freedom, but of the providers of these services themselves.

For academic professionals, accountability is disconcerting because it butts against their previous rationalities for self-government. These previous rationalities were premised on the idea of the university. This idea posits the university as an autonomous entity, an autonomy that is required because of the great public benefit that its professionals offer to society, benefits deriving from the professionals’ disinterested pursuit of knowledge via scholarship and teaching. This is an idea highly unlikely ever to have been real in fact, but it is an idea that has influenced the way the academic profession sees itself, speaks of itself, and justifies its notions of academic freedom, expertise, professional autonomy, and prestige. It is an old idea, emerging early and periodically in polemics against external influences on the university, especially those by Immanuel Kant (in 1798), John Henry Newman (in 1852), and Thorstein Veblen (in 1918), each of whom argued that knowledge, using Newman’s words, is its own end (Kant, 1979; Newman, 1982; Veblen, 1993). Such an idea of the university as a site for the production and dissemination of disinterested knowledge frames academics’ beliefs about their social positions, and it also justifies claims that the university should be protected against external influences, such as totalitarian governments (for Kant), antihumanist motives (for Newman), or the businesses and professions (for Veblen). Kant and Newman were not speaking of the American university (though Veblen was), which always had to contend with a structural tension between the disinterested pursuit of knowledge and the idea of public service, often defined as meeting the needs of industry. But even there, the idea of the university justifies its claims to freedom from incursions from bureaucratic or corporate imperatives (which “accountability” unquestionably entails).

Sheila Slaughter and Gary Rhoades have offered one of the most compelling arguments against such incursions into the university. They argue that institutions of higher education are now using a variety of state resources to create new circuits of knowledge that link these institutions to the new economy. Institutions of higher education are using these resources to enable interstitial organizations to emerge, which bring the corporate sector inside the university, to develop new networks that intermediate between the private and public sectors, and to expand their managerial capacity to supervise new flows of external resources. Universities are investing in new research infrastructures for the new economy. And all institutions of higher education seek to market themselves and their products and services to

students, who are now reconstituted as consumers while they are attending college and as outputs and products when they graduate.² Slaughter and Rhoades call this entire phenomenon “academic capitalism,” the imperatives of which make it hard to distinguish a private institution from a public one, and a nonprofit institution from the for-profit one (Slaughter & Rhoades, 2004, p. 4).

What characterizes academic capitalism as a new phenomena for the university, according to Slaughter and Rhoades, is that it replaces a “public good knowledge regime”—which valued knowledge as a public good to which every citizen had claims, paid heed to the academic freedom of professors to pursue knowledge where it leads, and assumed a relatively strong separation between public and private sectors—with an “academic capitalist knowledge regime,” which values knowledge privatization and profit taking and in which the interests of institutions, inventor faculty, and corporations are privileged over those of the public (Slaughter & Rhoades, 2004, pp. 28–29; see also Välimaa & Hoffman, 2008, p. 271). Similarly, Masao Miyoshi argues that the functions of the university are being transformed from state apologetics to industrial management, and while not perhaps a fundamental change, it is a radical reduction nevertheless of its public and critical role (Miyoshi, 1998, p. 263). I have also made similar arguments before (see Baez & Boyles, 2009, p. 167ff).

Such arguments about the changing role of the university have become, in a sense, their own genre. They certainly proliferate in leftist discourses in the university. In this genre, there is a reflection of a structure of feelings characterizing our current political context, namely, a sense of loss, lament, and nostalgia for the idea of the university. There is, for example, a sense of lament over the fact that the idea of disinterested knowledge has lost legitimacy in favor of numerous proliferating knowledges (e.g., applied and revenue-generating knowledge, but also religious fundamentalist attacks on intellectual arguments, postmodern critiques of modernism’s privileging of truth and science, etc.) (see generally, Barnett, 2000, p. 411). There is also a sense of lament over the lack of certainty about the distinction between academe and industry (as the academic capitalism discourse illustrates), as well as that of the academic and the administration. With regard to the latter distinction, there is a sense in which the academic aspects of higher education (in which teaching and disinterested pursuit of knowledge are the core) is made subservient to the administrative ones (in which managerial and income-generating imperatives are the core) (see, for example, Schmidlein & Berdhal, 2011, pp. 69–70. For an argument that such a tension is one of the structural conditions of the postindustrial society, as explained by Daniel Bell, and not *sui generis* to academe,

see Dordick & Wang, 1993, pp. 10–11). There is also a sense of lament (in the leftist critiques) over the loss of the critical public intellectual (in the Gramscian sense, I assume) that could be given refuge in the tenured halls of the university but whose value would primarily be outside of them. This intellectual would critique “neoliberal doxa” and not be relegated strictly to the small world of academe, “where it enchants itself without ever being in a position to really threaten anyone about anything” (see Bourdieu, 2003, p. 21). All these feelings are premised on an attachment to the idea of the university and lead to arguments that insist upon a distinction between the university and industry and between the culture of academic professionals and that of administration.

We may now read my narrative about accreditation fatigue with which I began this chapter within the context of a structure of feelings characterized by loss, lament, and nostalgia over the idea of the university. Such feelings about accountability relate to economic and political conditions in which the university’s continued public support cannot be guaranteed using previous logics of professional autonomy and public service. These feelings are also generated by the installation of corporate and managerial logic into how the university is to justify its existence to external publics, real or imagined, and to the ways such logics shape the way the university can understand itself. So the notion of accountability in higher education is worth looking into in a bit more detail.

In the field of higher education, there is often a reification of the concept of accountability, as well as that of the “constituents” imagined to be requiring and served by it. For example, William Zumeta argues that accountability is “responsibility for one’s action to someone or to multiple parties as a result of legal, political, financial, personal, or simply morally based ties,” and that “democratic accountability” entails understanding that its meanings are subject to reinterpretation over time as society needs, values, and expectations change (see Zumeta, 2011, p. 35). He later tells us that institutions of higher education “clearly have an enduring responsibility to serve their fundamental purposes in creating and transmitting credible knowledge, for intellectual innovation . . . as well as for public service and the offering of social critique where warranted.” And also, policymakers

have the right to ask higher education to respond to responsible public policy priorities . . . [to] demonstrate, with solid evidence and as rigorously as possible, not only what they are doing but what impact they have made. . . . [and to] expect efficiency . . . in higher education’s operations and to ask hard questions about them, to compare sensible institutional efficiency measures to those of appropriate peers, and to an institution’s past

performance, and so on. (Zumeta, 2011, pp. 140–141. For another example of similar kinds of reifications, see Johnstone, 2011)

We can, of course, question the assumptions Zumeta requires in order to use terminology like “responsibility,” “society’s needs,” “fundamental purposes,” “credible knowledge,” “public service,” “social critique where warranted,” “public priorities,” “solid evidence,” “hard questions,” “sensible institutional efficiency measures,” and on and on. We can question as well the assumptions about who has “the right” to demand this and the legitimacy of deciding not only what these things will mean but what conditions and evidence will be necessary to demonstrate compliance. As we have been suggesting throughout this book, these kinds of terms should not be taken to reflect empirical realities but particular kinds of governmental rationalities.

In the more critical discussions of accountability, however, there is a better understanding of the socially constructed nature of accountability, as well as a reflection of the unease related to the effects of such managerial logic in the ways the universities must give information about themselves. Philip Altbach notes that the amount of data and criteria used to make judgments about the accountability of any institution of higher education cannot be calculated through such efforts at accountability, for its functions remain elusive (Altbach, 2011, p. 243). One of the more insightful critiques of accountability comes from the late Bill Readings, whose caustic critique of the notion of excellence warrants a brief summary here.

Readings argued that the university now acts like a corporation because it *is* a corporation, a conclusion he makes by analyzing its resorting to the idea of excellence. The idea of excellence, he argued, is empty, functioning less to permit actual knowledge than to require extensive accounting, a quantification of the university’s activities that is radically at odds with any kind of philosophical arguments about what the idea of the university might entail. Excellence is invoked precisely to avoid such philosophical arguments, for it allows only constant self-evaluation in relation to performance indicators that ostensibly signify its commitment to society at-large, but which in fact masks its role in transnational capitalism. The magic of the idea of excellence is that it can quantify anything within its vacuous logic, allowing diversity, for instance, to be tolerated without threatening the system that ties the university to transnational capitalism (Readings, 1996, pp. 29–32). For Readings, the appeal to excellence illustrates that there is no longer an idea of the university that has any significant content—all that is required is that *any* activity take place, for the idea of excellence allows the university to refer only to an internal system of input and outputs and only in terms of matters of information (Readings, 1996, p. 39).

C. A. Bowers seems correct that “accountability” is one of the most powerful context-free metaphors used in education today, and that it is increasingly being interpreted within a technological mindset, becoming interchangeable with concepts like measurement, student outcomes, and behavioral objectives. Any sense of the idea of accountability as connoting a sense of obligation and judgment is being crowded out by a technorationality that seeks to maximize efficiency, predictability, and control. What happens, then, is a reductionism of experience into various component parts, which abstracts thought from the context of ongoing experience, and while this might increase efficiency and predictability, it also transforms what we can know as experience into only that which can be measured (see Bowers, 1979, pp. 316–317). This logic, then, fits the overall imperative of the “new” information age in which data are incessantly collected, knowledge increasing recast in terms of actuarial rationality and statistical reasoning, economic and social trends are continuously predicted, and decisions relentlessly made via technical-rational means (see generally, Sternberg, 1999, p. 6). The feelings of angst, loss, lament, and so on, that can be read into the accountability discourse in the university, then, reflect a structure of feelings of the professional in a society characterized by technorationality, statistical reasoning, and risk analysis.

The language of accountability has taken hold in the university both in terms of the material effects of such technorational standards and in the ways the university understands itself, all of which illustrates that the idea of the university and its assumptions about the professional are undergoing change. Indeed, neoliberal rationalities are leading to a reconsideration of professionalism. For the learning professions, ideology was the primary tool available for gaining the political and economic resources necessary to establish and maintain their status (see Freidson, 2001, p. 105). The ideology of the learning professions enforces the idea that the work of the expert is superior to that of the amateur, and these professions use this ideology to neutralize (or effectively counter) the opposing ideologies that provide a rationale for the control of their work by the market (“consumerism”) and by bureaucratic state entities (“managerialism”). (Freidson, 2001, p. 106). This tension in professionalism between autonomy because of expertise and the imperatives of consumerism and managerialism seems to me the root of the concerns about accountability and thus the structure of feelings associated with it. In other words, this tension is the result of two threats to the idea of the university: consumerism, to the extent that the university’s function is reduced to questions of economic efficiency, and managerialism, to the extent that these accountability processes are enforced by state agencies and those who hold the purse strings. So let us now turn away from concerns about

accountability in the university to the notion of accountability in neoliberal governmentality, an argument that concludes this book.

Accounting

Despite the arguments that somehow universities should not be subject to accountability, at least to the extent the concept is conflated with accounting, accountability reflects neoliberal rationalities of governing at a distance, that is, without direct intervention by state officials. The logic of accountability imposes consumerism and managerialism in the provision of social services. For example, Gary Becker gives us an illustration of such logic when he claims that voters are pressuring policymakers to require evidence that the benefits of government programs and regulations exceed their costs and that such calculations must take into account their effects on initiative, responsibility, and other essential values of a good society (Becker & Becker, 1997, p. 96). Becker's argument conjures up fantasies about how well voters are informed about such things and about the power that they actually have to influence policymakers, obscuring the moneyed interests that do have great sway over policymakers.

I do not question the vacuity of this consumerist and managerial discourse, and so I find that Pierre Bourdieu is correct in saying that such "neoliberal doxa" consists entirely of "logical monstrosities," such as (a) normative observations (e.g., "the economy is becoming global, so we must globalize our economy;" and "things are changing very quickly, we have to change"); (b) preemptory and fallacious deductions (e.g., "if capitalism is winning it is because it reflects our deepest nature"); (c) nonfalsifiable theses (e.g., "it is by creating wealth that you create employment"; "too much taxation kills off taxation"); (d) commonplaces that seem so far beyond question that the fact of questioning them itself seems questionable (e.g., "the welfare state is a thing of the past"; "how can you defend the system of public service"); (e) "teratological paralogisms" (e.g., "more market means quality, egalitarianism condemns people to poverty"); (f) technocratic euphemisms (e.g., "restructuring companies rather than firing workers"); (I would add, platitudes like "thinking outside the box," "striving for excellence," "evidence-based decision making," "program outcomes," "return on investments," "we must invest in our children's future," etc.), and other welters of semantically indeterminate ready-made notions, made routine by automatic usage, functioning as transparent formulas, and endlessly repeated for their incantatory value (e.g., deregulation, voluntary redundancy, free trade, free flow of capital, competitiveness, creativity, technological revolution, economic growth, fighting inflation, reducing

national debt, lowering labor costs, reducing welfare expenditures). Bourdieu argues that this doxa assails us from all sides and in the end comes to acquire the force of the taken-for-granted (see Bourdieu, 2003, pp. 79–80).

Bourdieu’s polemic captures the angst many of us feel in academe when we hear the term “accountability.” But we must see this angst in terms of a structure of feelings that needs to be reflected upon, that requires us to look to the sociohistorical conditions that make it possible, and to be critical of this so-called doxa in a way that allows us to see what is actually at work. Yes, this accountability rhetoric is oppressive in its pervasiveness, vacuity, and just overall stupidity, but we must be cognizant of how it is working in the governance of social services and of the individuals that are not only served by them but also who do the serving. Neoliberalism, as Nikolas Rose argues, takes social services and transforms them in accordance with economic criteria, such that these services now become thinkable strictly in terms of budgets, contracts, and a plethora performance-related “indicators” of efficiency and of allocating rewards. While arguably these practices might give some autonomy to those who provide these services (an autonomy not possible under strict bureaucratic control by state officials), they also give new forms of control to those who set the budgetary regimes, performance standards, output goals, and so on, which, paradoxically, reinstates state control (to the extent that the State will directly intervene when an institution is deemed not to be in compliance) (see generally, Rose, 1999, pp. 146–150).

In the consumerist and managerial logic of accountability, the stick and the carrot, following Rose, is financial, and accounting becomes a powerful technology for governing at a distance. The rationale for social services, and even for how we come to value them, is rendered calculable in terms of economic logic. The provider of these services (in the case of the university, it is faculty, administrators, and staff) must calculate themselves and their activities in economic terms, maximize their productivity in a cost effective way, eliminate wasteful activities, and so on. For academic professionals, to usurp Rose’s general arguments about financial logic, accountability requires calculation of their research and teaching (perhaps even service), not in the esoteric language that has defined their work in the past—and certainly not in a language of professional autonomy that has historically justified their insulation from outside interference—but in the language of quantifiable outcomes. Academic professionals are governed in two ways: as relays for such calculations and as objects of such calculations (see generally, Rose, 1999, pp. 151–153). In neoliberal rationalities, academic expertise is made governable by the logic of accounting and in which language it must now speak of itself. As Rose argues, this language changes everything: the

subjective becomes objective, the esoteric becomes factual, and so forth. Of course, accounting logic hands over the power to objectify and calculate to accountants and managers (Rose, 1999, p. 153).

Indeed, the professionals gaining significant power over others in these forms of government are the internal and external auditors. Michael Power argues that since the 1980s, in the United Kingdom specifically (although we can assume this to be case in the United States as well), there has been an explosion of audit activity arising from the new public-management movements, increased calls for accountability and transparency, and the rise of quality-assurance models of organizational control (Power, 2000, p. 111; see also Power, 1999). Power indicates that to understand what he calls the “audit society,” one must not think in terms of the amount of auditing going on but of the circulations of an idea throughout the social milieu, a process in which accountants have been selling their expertise in settings other than in business. In other words, to understand the audit society is to see auditing as not only a practice but as a model for thinking about social institutions, and I would add, thinking about oneself as well (see Power, 1999, p. 112).

As I said, Power attributes this explosion of auditing since the 1980s in the United Kingdom to a number of things. First, there was the emergence of a new public management movement, which increased the demands for reform in the form of auditing to determine the return on investment in public services, and which brought with it all kinds of monitoring systems (in the United States, I think these movements are part of the evidence-based lingo that gets thrown about uncritically throughout the social milieu). Second, there were calls, ostensibly on behalf of citizens, taxpayers, and others, for more accountability in both the private and public sectors, but it was the private sector’s corporate thinking that shaped the way the public sector was asked to answer these calls (in the United States, I think these calls result in the increase in program reviews like the ones I mentioned at the start this chapter, as well as all kinds of evaluations of social services). Third, there was the rise of quality assurance movements in which the logics of industrial production became universal schemata (in the United States, I think this is the logic of movements like TQM, MBO, “excellence,” “what works,” etc.). These assurances require organizations to set objectives and performance measures and create monitoring and evaluation systems. What the model of the audit does is establish both a reporting and a validation of the system as a whole, changing the regulatory style from a command-and-control mode to one that regulates from below (or at a distance, according to Rose) (Power, 1999, pp. 112–113).

For Power, this auditing mentality is essentially an ideological imperative and not an instrument of true accountability. Well, I am inclined to favor an argument that avoids the kind of rationalism associated with assertions about ideology and truth, but I am with Power when he says that auditing is not a “neutral act of verification but actively shapes the design and interpretation of institutions.” Not only does auditing increase new interests at the expense of others, it establishes all kinds of bureaucracies—private, public, and what I think are, quasi-public, such as the accreditation agencies—to conduct, assess, and respond to these evaluation processes (see Power, 1999, pp. 114–115). To call something an audit, following Power, is to place it within a particular field of social and economic relations, which would be different if called something else (Power, 1999, p. 116). Power seems correct but does not go far enough. As Rose argues, auditing is a form of control directed specifically at the systems of control—audits are controls of control (Rose, 1999, p. 154).

As a governmental technology, accountability directs behavior in a very specific way. It not only targets how a service is to be rendered “real,” and “valuable,” but also how we are to speak of and act in accordance to that reality. Rendering something “accountable” in the ways I just discussed actually reshapes it: it makes it set objectives; it makes it amenable to the proliferation of standardized forms of review and recordkeeping; and it makes it displace the logics that previously governed it (e.g., in academe, the logic of professional expertise and autonomy) (see generally, Rose, 1999). Rose (and Powers too) is correct that all these attempts at making things transparent and standardized reflect a fantasy, for these accountability processes only multiply the points at which suspicion can be generated (much like, I would add, the increase in bureaucratic steps at my university intended to eliminate mistakes and increase efficiency wind up only multiplying the points at which mistakes can happen, thus creating greater inefficiency) (Rose, 1999, p. 155).

Accountability, at any rate, (a) transforms the logic of providing social services from ones of social welfare into ones governed by notions of risk, utility, and efficiency, which, of course, directs statistical reasoning to the served as well as the servers; (b) generates information to the public about social services in the form of “data” that can be easily stored and transmitted via databases and that transforms knowledge into probabilities; (c) instantiates transparency and efficiency in the governance of these services, although, in fact, accountability gives authority to auditing experts who are often invisible to us, that is, we do not know who they are, where they work, and so on; and (d) makes individuals (experts and subjects) understand their relationships to these services in terms of the logic of accounting, for

they now will be subject to statistical and accountability panics if they do not conform themselves to this logic, or if the logic makes them vulnerable to cost-cutting measures, or worse, the exception.

Accountability, then, is as much about governing those served by social services as much as those who are experts in a society in which expert knowledges are necessary for government. That is, the accountability movement in, say, higher education, is not simply about higher education per se but about keeping the governors under control. Work (professional and otherwise) has itself become a vulnerable zone in which employment must continuously be earned, in which the employee is ceaselessly assessed in light of accountability measures, and in which the employee is constantly subject to threats about downsizing (or resizing or whatever nomenclature is used to avoid calling it a termination) (see generally, Rose, 1999, p. 158). At the risk of overstatement, employment is now a permanent state of exception, a zone of perpetual insecurity, a zone in which one's existence as a worker is under constant threat. We should not see accountability just as an imposition on the university as if it was some inherently *sui generis* social institution that should be judged under different criteria than the rest of the institutions in the world. In neoliberal rationality, there is no distinction to be made between, say, traditional economic institutions and other kinds of institutions. Accountability is a technology directed mostly at the expert, for bringing the expert—traditionally above the fray, creating the mechanisms of control but being outside of them—into the folds of control.

Understanding the governmental rationality of accountability requires that the academic, for example, suspend her belief that there is something inherently essential about her work. That belief may make her feel better, personally, but it obscures her role in the governing of individuals as well as the ways in which she is herself governed. For the status of the academic in society is, in essence, the result of two kinds of governmental power. First, there is an “external” form of power, one from which he benefits greatly and which justifies his existence in the first place, one that involves the deployment of his academic's expertise in the government of individuals, one that requires the theories and techniques he proliferates in order to govern the world. And second, there is an “internal” power, in which the academic is governed by other forms of academic expertise (e.g., statistical reasoning, technorationality, risk analysis, and auditing processes). We have been discussing the experts' external role throughout this book; that is, the use of their expertise in the processes of government. In this chapter, I wanted to highlight the ways in which the expert is brought under governmental control, a control, by the way, that is made possible by the use of another kind of academic expertise (in the case of accountability,

the academic expertise that quantifies and calculates, creates and measures performance indicators, and subjects the expert to auditing controls). Accountability penetrates academic expertise through a range of new techniques for exercising critical scrutiny of that very expertise (e.g., through budgets, accounting, audits, etc.) (see Nikolas Rose, 1996, p. 54).

I think that the discourse on accountability offers us a way of thinking about not only forms of governing “at a distance,” but also those of governing “from within” the often nebulous (to outsiders) world of the expert. Following Foucault, we may reinterpret the so-called crisis discourse about universities as not just about loss of power but, on the contrary, a multiplication and reinforcement of their power effects as centers in a “polymorphous ensemble of individuals who virtually all pass through and relate themselves to the academic system” (Foucault, 1980, p. 127). The “internal governors,” if you will, gain a crucial kind of calculative knowledge in the university, are credentialed as experts by university degrees, become empowered by the imprimatur of scientificity that university status gives them, and cycle back to the very institution that created them to make sense of it with the very knowledge and skills they learned in that institution. I think most academics understand (or can) the ways accountability work as a form of external control—controls that they attribute to consumerist or managerial logic, to academic capitalism, or what have you—but they may not understand the internal controls exerted by other academics. For in a significant sense, the practices of accountability are invented by academic professionals—people who have been credentialed by academic institutions.

Accountability, therefore, not only highlights the ways in which consumerist and managerial controls are exercised through and because of universities, but how those very controls are actually internal to universities, and because of this, there are internal struggles between academics over particular governmental rationalities for their work, whether or not those academics see them in that way. Academics may want to see their struggles with accountability as being against external actors—business or state bureaucrats—but their real “opponents” in these struggles, so to speak, come from within. I believe these struggles should be made explicit, for I think resistance to particular forms of control comes from first understanding what it is one is resisting.

We can lament the loss of the idea of the university that legitimized professional autonomy and expertise. It may have had its roots in elitism and antidemocratic assumptions, but it was those very assumptions that granted academic speech—in all its forms—any legitimacy. And it allowed for a multiplicity of forms of academic self-government. For example, the scientist could act as a scientist, the humanist as a humanist, and the critical scholar

as a critic, and any of these roles could be considered *sui generis* and thus not amenable to any easy—or easily accepted—mode of comparison. But now the academic expert, like everyone else, is amenable to the logic of risk calculation, the logic of comparable quantifiable measures, and the logic of neat little matrices. All academics are subject to a common measure of excellence, to a calculation about a return on investment, to the permanent state of insecurity all this entails and that tenure seems no longer to alleviate.

At any rate, and to conclude this entire polemic on government, these swarming technologies of performance, as Mitchell Dean calls them, which are designed to penetrate the enclosures of expertise and subject it to new formal calculative regimes, puts the expert in the dual role of governor and the governed. As he indicates, the regime of budgets, performance indicators, benchmarking, and so forth, as well as the imperatives of marketization, privatization, contracting out of services, and so on—all in the name of accountability and reform—are more or less technical means for locking moral and political requirements of the shaping of conduct into the optimization of performance. They are the indirect means of regulating agencies, transforming all spaces and activities (affective, corporal, figurative, and physical) into calculable spaces and turning subjects and experts into calculating (and calculated) individuals (Dean, 1999, pp. 168–169).

For those of us who work in universities, we need first to reflect on how we are complicit in the governance of individuals—although this may not be something we actually want to reflect upon, for it puts our idea of the university in even further doubt. We may like to think that the threat to the idea of the university is external to us and thus be blind to the possibility that such a threat to the idea of the university just might be coming from within the university. Plus, this will only embed us hopelessly in a structure of feelings from which we will see no escape. And then, second, we need to reflect on how we might be able to resist—both to govern and to be governed in the ways that are currently the case. We could insist on analyses that are characterized by loss, lament, and nostalgia, but again, that embeds us in a structure of feelings from which we may want to escape. Or, we could ask ourselves whether there might be areas in which we might govern ourselves differently. Or, we could ask ourselves whether we should continue to create calculative mechanisms, which, at some point, will come back at us. Or, we might be able to refuse to calculate ourselves. Or, we might want to miscalculate ourselves, putting ourselves at risk, knowing that taking such a risk arises foremost from a governmental rationality that makes sense of us as always already at risk.

Notes

1. Please see the section on affect in Chapter 3 on statistics. A structure of feelings—for example, statistical panic caused by the deployment of statistics—is generated by sociocultural conditions at a given moment.
2. Slaughter & Rhoades, 2004, pp. 1–2. Others do not necessarily agree with this logic. For example, Daniel Greenberg, while arguing more generally about the “science enterprise” and acknowledging the increasing interconnection between science and industry, indicates this whole enterprise is ensured by a university system that is well supported by, but ingenuously decoupled from, the general economy. See Greenberg, 2001, p. 3.

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