Adelheid Heftberger

Digital Humanities and Film Studies

Visualising Dziga Vertov's Work

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For Maksim

Acknowledgements

In international research, one may find both historical and recent activities in formal film analysis, concurrently indicating paths to film scholarly explanations. Only in collaboration and exchange with colleagues is academic research possible and meaningful, and for that reason my first expression of gratitude goes to the so-called Vertovians who form a special circle within that of scholarship and became my friends over the course of time. To these belong, in the first rank, not only Aleksandr Derjabin, John MacKay and Yuri Tsivian but also my project partners Michael Loebenstein, Thomas Tode, Georg Wasner and Barbara Vockenhuber, as well as Matthias Zeppelzauer, Dalibor Mitrović and Maia Zaharieva. My sincere thanks go to Lev Manovich for the inspiring collaboration and support in creating the visualisations. My heartfelt thanks to the Slavic scholars Eva Binder, Natascha Drubek and Barbara Wurm, who were always ready and willing to give me information in response to questions both small and large. No less hearty are my thanks to my colleagues in Russia, who excel in both their comprehensive knowledge of film history and their readiness to be of assistance, Peter Bagrov, Nikolai Izvolov, Sergei Kapterev and Naum Kleiman, as well as to the archive staff in Russia for their willingness to provide information at short notice and the access to research materials and for their encouragement: Elena Kolikova (RGAKFD), Valerij Bosenko (GFF, died 2013) and Oleg Bočkov (GFF). For stimulating conversations on various topics, my special thanks go to Oliver Hanley, Renaud Tschirner, Karen Pearlman, Anna Bohn and Veronika Heftberger. Not the least, I am especially grateful to the Austrian Film Museum for the permission to use illustrations and the Brandenburg Centre for Media Studies (ZeM) for partly funding the English translation. My very special thanks go finally to the translator from the original German, Stewart Tryster, who brought commitment, the absolutely vital film-technical professional knowledge and enjoyment to his work with me.

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Chapter 1
Introduction

In Vertov's view the mission of cinema was not to present facts, but to explain them. (Tsivian 2004b: 10)

Possible humanities future: Instead of critique, construction. Instead of close reading, patterns. Instead of interpretation, conversation. (Manovich 2012)

Anything we study thoroughly loses value for us, Reger said. We should therefore avoid studying anything thoroughly. But we cannot help studying everything thoroughly, that is our misfortune, by doing so we dissolve everything and ruin everything for us, indeed we have very nearly ruined everything for us already. (Bernhard 1989: 179)

The character from Thomas Bernhard's novel may be speaking about the works of Goethe and Shakespeare but expresses an uneasiness in principle about the analysis of art. I wish, however, to contradict the great Austrian author. If one analytically comes to grips with the oeuvre of the Russian director Dziga Vertov (David Abelevič Kaufman), in the process dismantling his films into the smallest possible units and graphically displaying individual portions in a new manner, one inevitably arrives, in addition to and alongside academic realisations, at a fundamentally deeper understanding of Vertov's films, his ideas and his times. Not only during the director's lifetime was criticism levelled at a certain mysteriousness about his films; it is not rare for bafflement also to be expressed by their audiences of today. Furthermore, analysis is consonant with Vertov's own artistic self-perception, for the director repeatedly represented his creative processes in numbers and tables and was enthusiastic about both formal and technical experiments and developments in film work. A precise knowledge of the filmic resources at his disposal, as well as the techniques and their effects, were all part and parcel of this.

The life of the Jewish documentary film pioneer (1896 to 1954) followed a restless trajectory. His family dispersed in all directions early on, with the multitalented Vertov migrating from his (now) Polish home town Białystok to Russia, where he began a career in newsreels. Moscow and St. Petersburg were the laboratories for an

atmosphere of new departures, encompassing every aspect of life, after the October Revolution. Leading figures such as Aleksandr Rodčenko or Vladimir Majakovskij energetically proclaimed the victory of new forms of expression and the young David Abel'evič Kaufman had plans for film that were just as exuberant and ambitious as were those of his role models for literature, photography or the theatre, and he adopted the artistic pseudonym of Dziga Vertov. His manifestos, articles, speeches and diary entries testify to a creative and polemic intellect that insisted on the independence of art even while fully committed to the service of the Communist cause. Already in his first manifestos, the director and the Kinoks (Vertov's neologism for his fellow campaigners, translatable as "film eyes") proclaimed to the world that the old cinema had to die and they permitted only authentic documentary film to qualify as real film art. Vertov was never to shift away from this deep conviction, even though it was ultimately to mean the slow and painful end of his career. Above all, after Lenin's death and Stalin's assumption of power, his artistic difficulties increased as the new auguries of cultural policy were restrictively enforced. The director was finally physically and mentally broken by the dictates that no longer permitted him to make films according to his own ideas.

Vertov's medium of expression was the film, which, as a technical medium and as a collectively produced art form, rose in the ranks to become the avant-garde paradigm of artistic production in the young Soviet Union. Those engaged in film-making claimed a leading role in the arts at a time in which the old social system was to be overthrown and replaced by a new order. For what could more effectively depict the achievements of the Soviet state, present new visions and surprise and enthuse the people with special effects than film? In the 1920s, throughout the country, the illiteracy rate was high, and the population was a heterogeneous mixture of peoples, differing greatly from one another in terms of language and culture; the political leadership wished to reach them in a joint effort with the film-makers. Due to the conditions of the making and distribution of films, their production and exhibition were easier for the Party to control than other art forms, although most of the film-makers had no intention of working subversively against the state, as such famous directors as Sergei Eisenstein, Vsevolod Pudovkin and Abram Room, as well as the representatives of FĖKS (The Factory of the Eccentric Actor), also saw themselves completely in the service of the Soviet Union. At the 1928 Party conference for cinema workers, the avant-garde representatives asked for guidelines for their film work and received a clear answer, taking up Lenin's statement of 1922: film must be comprehensible to millions of people, for if the population, above all the rural population, does not understand film, then all the agitation and propaganda remain ineffectual. But Vertov was accused of being unable to meet this requirement, although he himself was firmly convinced that his documentary films were grasped by the population.

My decision to adopt a formalistic and quantitative (computer-aided) method was conditioned not only by the object of research and Vertov's own working method but must also be understood against the backdrop of current changes in university research. Knowledge has for a while now been produced, transmitted and stored in completely new ways. It is, above all, the humanities that are currently in

the grip of a transformation that could perhaps fundamentally alter the demarcation lines separating them from other fields and, thus, their very self-image. Beyond this, investigations of this kind principally facilitate accessibility in the field of visual depictions of time-based processes – an area which has its origins in the environment of the Russian Formalists (in the 1920s) and which has gained a new immediacy with technological advances and the computer-aided ability to evaluate complex and extensive data sets. Methods which are supported by quantitative data acquisition and attempts at quantification are being given a new impetus by the integration of computer-based and software-based technology, which could be fruitful both for theoretical investigations and for practical implementation.

In the meantime, even conventional computers have made it possible to manage and visualise far more extensive data sets of individual images in higher quality than was the case only a few years ago. Film material is increasingly available in higher resolution, and automatic video analysis is constantly being further developed. In this area, academic film research is interwoven with digital databases, which no longer display only metadata, but can now be enabled simultaneously to deliver research tools in full image. My contribution is a more modest one, but it is to be hoped that the concrete example of Dziga Vertov – whose work has, not without reason, been compared to a database (Manovich 2001) – will show how computer science and information visualisation can be meaningfully applied to film-scholarly and film-historical analysis. Visualisation could thus be understood as a joint aspiration of artists and film scholars, as the desire to see more than a first glance at the performative, and thus temporally bound, art that film is can ever permit. It is no coincidence that what Vertov's *kinoglaz* concept celebrates as the basic principle of his film theory is precisely the camera as technical marvel, superior in every respect to the human eye and simultaneously capable of both overview and microscopic insight.

This book is based on a body of empirical data created between 2007 and 2010 in the course of the interdisciplinary research project Digital Formalism. This project was financed by the Vienna Science and Technology Fund (WWTF). The project partners were the Interactive Media Systems Group of the Vienna Technical University, the Institute of Theatre, Film and Media Studies of Vienna University and the Austrian Film Museum. Since then the academic landscape has undergone great change; the digital humanities have become institutionally established at Austrian and German universities, research centres have been founded, and associations for digital humanities have been brought into being. Exciting times have thus begun for those researchers who wish to work at the intersections of the disciplines. In 2007 none of these developments could yet be seen; today Digital Formalism is considered a pioneer project for the collaboration of the humanities and computer science, for the application of computer-aided analysis and the interpretation of the data that follows it. Some challenges that the scholars undertook in 2010 (the end of the project) are, however, still present and pressing. How does one arrive at knowledge from the quantitative data and in what form should it be formulated? What contribution can quantitative analysis make to film history? How can the data be depicted in order to enable the work of different disciplines?

In the Digital Formalism project, I created extensive annotations for eight of Vertov's films. I would like to describe both the software used and the process of manual annotation, as well as presenting the results. This data, which depicted Vertov's films to a degree of empirical description never previously achieved, could be put at Lev Manovich's disposal for continuing collaboration. From it, in a stimulating exchange, we jointly developed various forms of visualisation, which are chronologically presented in this volume. These experiments are intended, among other things, as a contribution to a fundamental discussion about the graphic depiction of filmic structures. Alongside early attempts which work with abstract depictions, we were ultimately able to arrive at the so-called direct (reduction-free) visualisations. For Manovich and myself, this method offers an exciting new approach to visual representations of films.

One aim of the project, and my continuing work which followed it, was also to develop the computer-aided methods on the basis of Vertov's writings and thus to develop his own terminology. I carried out the preliminary work for this in the Dziga Vertov Collection at the Austrian Film Museum, the most extensive part of the estate outside Russia, in which many handwritten documents, including letters, poems and diagrams, are preserved. Vertov's own graphs and diagrams constitute a valuable approach for the investigation of montage and rhythm in his films. Some of these documents have already been published, and in some cases annotated; a detailed explanation of the graphic design and concrete purpose as it relates to Vertov's filmic work is, however, for the most part, a gap that has yet to be filled. Using selected examples, an attempt will be made to close that gap at least for a few documents and to gain insight into the systematics of Vertov's recording. Generally, Vertov's films are held in differing versions, the lengths of which, in some cases, deviate from one another considerably.

Vertov's work is particularly suitable for formal investigation, as the director conceived his messages in formal procedures such as shot length, shot size, image composition or intensity of motion. In order to gain meaningful insight into Vertov and his films, this manual or computer-aided data analysis must, however, be coupled with film-historical knowledge and a study of sources. Critical work with sources enables essential information to be gained, for the state in which the film prints have been preserved, the precise analysis of the film material and familiarity with historical film techniques provide testimony regarding the archival policy and political culture of the Soviet Union in the 1920s and 1930s. Part of my work is thus devoted to researching the state of preservation of the prints of Vertov's first eight full-length films, the same body of work which was selected for Digital Formalism. My results will be embedded in a brief description of content and illuminated by the mirror of the contemporary press. In addition, formal results from the annotation will be presented in summary form and discussed.

The central section of my book will include three detailed studies of specific questions dealing with form and content. Through the analysis of the formal procedures and the functions with which Vertov invests them in the respective films, information may be gained regarding their varying significance. Vertov's use of faces in close-up is analysed and visualised in two of his films. I also devote a

detailed study to the interval, a term central to Vertov's film theory. An illustrative study of motion direction and motion intensity enables a closer look at this category, for which the research to date has adhered more to Vertov's writings. Finally, I investigate the different portrayals of the political leaders Lenin and Stalin in Vertov's films.

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Chapter 2
The Measurement of Aesthetic Phenomena

> Film art is the art of the abstract word. We are abstract people. Every day splits us into ten activities. That is why we go to the cinema. (Tynjanov 2005: 242)

To say that a work of art may be broken down into smaller units may be a banal statement. It is also nothing new to portray or arrange these building blocks in one or another way, whether as part of the artistic process or due to a technical necessity during production. What for creative artists is an integral component of their work raises methodological questions in scholarship: is it academically even constructive to divide works of art into measurable units, to extract formalised data and transfer them to another system of recording in order to test theses or attain new statements? And if so, for which corpora and approaches would it be conceivable and meaningful? Different theoretical approaches have, after all, led to various methods in the study of film and literature.

Alongside the still strongly represented poststructuralist theories in university humanities research, a trend towards formalistic practice may again be observed. According to Vinzenz Hediger and Markus Stauff, who in 2011 co-edited the special issue "Empirie" for the Zeitschrift für Medienwissenschaft, the humanities and media studies are currently located between the pressure to justify themselves towards a traditional disciplinary self-image and the interest in new technologies. These tendencies are influenced on the one hand by other university disciplines society and on the other by society. Hediger and Stauff see only two alternative strategies as a way out: either one elevates the distance to empiricism to the status of a constitutive characteristic, representing the claim to legitimacy of the humanities and cultural studies, or accepting the supposed priority and dominance of empiricism, one qualifies one's own research with further verifiability in the framework of a quantitative or scientifically precise procedure (Hediger, Stauff 2011: 10).

Whether such reservations towards formalistic or empirical methods can also be established geo-culturally, that is to say, in the sense of different academic traditions in individual countries, is not a question easily answered (also Lepenies 2006). At

least in the German-speaking regions, it seems one is more cautious than open regarding the potential. The film scholar Barbara Flückiger sums up these concerns in her essay "Die Vermessung ästhetischer Erscheinungen" and is not very optimistic:

> Whether and how one may or should measure aesthetic objects is the subject of fundamental debate. Anyone wishing to deconstruct the inherent imprecision characteristic of all artistic work into measurable units is easily exposed to suspicion of reductionist positivism. Notwithstanding a long line of attempts, going back to the turn of the 20th century, to place philosophical aesthetics on an empirical-scientific basis, empiricism and aesthetics seem to find themselves still in a field of tension that can barely be overcome. (Flückiger 2011: 44)

The author, herself active in projects served by computer-aided film analysis, expressed, however, the commitment of empiricism to the tradition of the humanities "marked by a higher philosophical aesthetic". She outlines the history of the empirical approach to aesthetic research in its disciplinary context in order to argue that a new tradition of computer-aided collaborative cooperation with web-based interfaces has developed out of the original psychological approach: the "digital humanities 2.0". This then advances the humanities-oriented line of work-immanent analysis with formalistic or structuralist methodologies (Lepenies 2006: 45).

In the USA there are apparently fewer reservations; there one is more engaged with closing the gaps between the methodological and theoretical approaches. Thus, for example, Trevor Owens claims that it should not be outlandish for humanities scholars to see the objects of their research as potential data. In their analysis, one could definitely make use of methods that already exist in the humanities, for example, hermeneutics and interpretations. Subsequently, according to Owens, the data could undergo the same procedures one has thus far used for original texts:

> We can choose to treat data as different kinds of things. First, as constructed things, data are a species of artifact. Second, as authored objects created for particular audiences, data can be interpreted as texts. Third, as computer-processable information, data can be computed in a whole host of ways to generate novel artifacts and texts which are then open to subsequent interpretation and analysis. Which brings us to evidence. Each of these approaches – data as text, artifact, and processable information – allows one to produce or uncover evidence that can support particular claims and arguments. Data is not in and of itself of evidence but a multifaceted object which can be mobilized as evidence in support of an argument. (Owens 2011)

This approach nonetheless makes it possible to redetermine the relationship between text and data and to discuss it productively. If there is a willingness on the part of the sciences not to understand data by definition as objective entities, the process of data collection and classification is potentially opened to the interests of the humanities. In this way, the definition of a procedure such as "data mining" can be broadened from the general and literal sense of "extracting something useful from a mountain of data". The term is mainly used in the context of obtaining knowledge from databases, with the aim of deploying marketing strategies efficiently. Though this subject was hitherto mainly taught in information

management, an effort is now being made to apply it meaningfully within the humanities, e.g. the application of data mining in the case of film and television scripts,[1] or the analysis of colour in film.[2]

The Sciences and the Humanities: Culture Clash or Interdisciplinary Potential?

The acquisition of knowledge is traditionally evaluated differently in the humanities than are the results of research in the natural sciences, while at the same time, the results of research in the humanities are – just as traditionally – viewed with the suspicion of being in principle unscientific. Demarcated from "exploitable" measurable knowledge, the humanities consciously work in categories that are not easily expressed; discourse and the ability to grant validity to divergent convictions profoundly mark these disciplines.

The humanities' immanent reflection on their own scholarship and methodology is considered quite constraining in interdisciplinary collaboration. The media scholar Lev Manovich expressed this polemically in an interview: "The problem with the humanities [...] is, that people tend to worry too much about what can't be done, about mistakes, problems, as opposed to just going and doing something" (Williford 2011). Manovich is here already looking at joint research projects of the humanities and the sciences, as naturally software and computers can simplify and accelerate experiments by "trial and error" in data-based disciplines. Ideally, interdisciplinary projects combine the different approaches of the individual disciplines and work together on the problems. Increasingly frequently, therefore, interdisciplinary project applications are being developed and submitted: "The contacts between the humanities and technical studies are shifting the questions of what culture is, what characterises it and what determines its development ever more into the interest of research" (Schneider, Wedell 2004: 7). The humanities not infrequently also profit financially from such projects.

The step to interdisciplinary research can also be perceived as progress. In the context of the by now decades-long trials of strength and establishment of hierarchies at the universities, the focus of which is the humanities (above all, the philologies) and the sciences. One may put this debate in a wide historical context, beginning with the case of the historical pair of opposites in the case of Great Britain. Thomas Kühn thus understands the two-culture controversy as a conflict pattern of long duration,

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[1] Adam Ganz and Fionn Murtagh have delivered a lecture in Swansea in 2010 entitled "From Data Mining in Digital Humanities to New Methods of Analysis of Narrative and Semantics." See also the work by Manuel Burghardt (https://ch.uni-leipzig.de/burghardt/).

[2] See Barbara Flückiger's ERC Advanced Grant "FilmColors" (http://www.research-projects.uzh.ch/p21207.htm) and the work done by Niels-Oliver Walkowski and Johannes Pause (urn:nbn:de:kobv:b4-opus4-25910).

the origin of which is to be found in Victorian England with Thomas Henry Huxley and Matthew Arnold and which was taken up again in the 1950s by C. P. Snow and F. R. Leavis. Huxley's inaugural address at Mason Science College in Birmingham in 1880, entitled "Science and Culture", initiated the debate and was followed 2 years later by Arnold's reply in the form of the article "Literature and Science". The discourse was then resumed by Snow in 1959, this time with Leavis as sparring partner. Even though Kühn refers to the English politics of higher education and even though he, in accordance with society, perceived universities as a cultural system within the respective national culture, there is still a battle of power in evidence, valid for both the Western European and North American cases (Kühn 2002: 87).

> It is the tension between the primacy of educating towards a profession (training) and the non-utilitarian "education" towards being a gentleman. This tension is on the one hand connected to a Utilitarianism aimed at financial success. On the other hand it is linked to a more idealistic contrary position, critical of civilisation and uninterested in the goal-oriented education at the universities, which it even considers damaging. (Ibid.)

The biologist Huxley, in 1880, still had to plead eloquently and, to a certain extent, quite polemically for the recognition of the sciences as a component of culture. His address voiced a close connection between the sciences and the economic exploitability of education, which seems more topical than ever today. However, he warned against a purely practical science and against a one-sided specialisation in the sciences and asserted that pure research could be wholly justified (ibid: 44). Naturally, the arguments have changed since then; pure research is today firmly anchored in faculties of science. Matters have not, then, remained at simple "training", which could be assumed to be the basic prerequisite for integration into university structures (unlike technical colleges).

Through the increasing integration of interdisciplinary projects, with a view, perhaps, to the concept of a "cyberinfrastructure" (also known as "e-science", "e-research" or "e-infrastructure") or in the new discipline of digital humanities, the humanities have themselves been taking an active step in the direction of a redefinition. This includes the trend towards new study programmes that make it possible to acquire basic knowledge in data modelling, the Java programming language or legal frameworks alongside the humanities specialisation.[3] This creates possibilities for university education that initiates a convergence of education and training. The question still remains as to whether these two strands can meaningfully be linked, methodically and practically, and whether it ought, in general, to be a university aim increasingly to offer such courses. For Alexander von Humboldt and the German idealists, culture was more than the sum of the knowledge that could be taught; alongside it – as the result of study – one's own character should be cultivated and developed (Berry 2014: 52). Against the Humboldtian model of higher education, a utilitarian transmission of knowledge, which could lose its way in the description of modules and strategies to increase efficiency, is once more in the foreground of the current development (Nida-Rümelin 2006: 70).

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[3] For example, at the Centre for Information Modelling at Graz University, cf. https://informationsmodellierung.uni-graz.at/de/zentrum/. Last accessed 25 Aug 2015.

The traditional approach in research and publication practice, as well as the self-conception and problem-solving strategy, nonetheless remains, and varying views regarding "exploitable knowledge" arouse conflict in interdisciplinary collaboration. Kühn assumes that the basis of the debate is the conviction of the knowledge elite that one is challenged to find the best way to help society out of its crisis. This can take place only through specialisation and analytical thinking as practised in the sciences or by training and promoting a capacity for systematic thought that is free from practical application (Kühn 2002: 52). In Kühn's summary, the controversy between Leavis and Snow is later mainly marked by the contrast between liberal-humanistic criticism of civilisation on the one hand and by utilitarian optimistic scientific positivism on the other (ibid.: 43).

From "Cyberinfrastructure" to the Digital Humanities

It should be said at the outset that what precisely one understands by digital humanities is still the subject of lively debate on the Internet, in articles and anthologies, as well as at conferences and discussions. The statements there are as provocative as they are interesting and, for the present, at any rate, largely limited to the Anglo-American sphere. Despite the abundance of publications, some contributions have already achieved "cult" status, some voices have established themselves as leaders, and there are manifestos with great entertainment value.

In 2009 two American scholars published a foundational text, the so-called Digital Humanities Manifesto, which humorously outlines the new discipline. In it, Jeffrey Schnapp, director of the Harvard metaLAB, and Todd Presner, professor of German Languages and Comparative Literature at UCLA, describe, among other things, the attitude of digital humanities to the traditional and the new locations of the acquisition and dissemination of knowledge:

> Digital Humanities is not a unified field but an array of convergent practices that explore a universe in which: a) print is no longer the exclusive or the normative medium in which knowledge is produced and/or disseminated; instead, print finds itself absorbed into new, multimedia configurations; and b) digital tools, techniques, and media have altered the production and dissemination of knowledge in the arts, human and social sciences. (Schnapp, Presner 2009)

The debates within the field still, perhaps more than ever, revolve around a possible definition of its own discipline, which moved Dave Parry to call such publications "something of a genre essay" (Parry 2012: 429). The titles of anthologies on this subject, too, for example, *Understanding Digital Humanities* (2012), *Defining Digital Humanities* (2014) or *Debates in the Digital Humanities* (2012)*,* are testimony to the lively discussion among scholars about their own object of study. With few exceptions, however, voices from European academia are (still) lacking. In addition, the contributions seem to come overwhelmingly from the humanities, a few from libraries and archives, and there are only isolated examples from other disciplines, such as information visualisation. The discussion thus seems to remain, for now, in its own field.

The digital humanities emerged, over the course of many years, from the previous *Humanities Computing*, which a reading of *Defining Digital Humanities* makes clear. It is therefore unremarkable that the choice of the term digital humanities was analogous to the introduction of a brand and just as carefully planned. In the provocative article "Digital Humanities As/Is a Tactical Term", Matthew Kirschenbaum, director of the Maryland Institute for Technology in the Humanities (MITH), argues that one decided on this name because it fulfilled two basic functions: "[It] possessed enough currency and escape velocity to penetrate layers of administrative strata to get funds allocated, initiatives under way, and plans set in motion. On the other hand, it is a populist term, self-identified and self-perpetuating through the algorithmic structures of contemporary social media" (Kirschenbaum 2012: 417). In the meantime, the digital humanities can already look back at an interesting history in several phases of development. Originally the computer was understood as a purely technical support for the traditional humanities scholars and less as "participant" with its own critical potential (Berry 2012: 3). The beginnings of the advancing fundamental restructuring of knowledge and the academic worlds can be helpfully dated to 2003 with the "Atkins Report". At this time a panel commissioned by the National Science Foundation (NSF) published this groundbreaking report, colloquially named after then chairman Dan Atkins (2003). The NSF, founded in 1950, is an independent American government organisation tasked with promoting basic research across disciplinary borders. In two subsequent reports from the years 2006 and 2007, published by the NSF and the American Council of Learned Societies (ACLS), the term was conclusively defined and disseminated. The ACLS is a private non-profit association of over 71 national scientific organisations, which has an ambitious vision for the NSF, as follows:

> At the heart of the cyberinfrastructure vision is the development of a cultural community that supports peer-to-peer collaboration and new modes of education based upon broad and open access to leadership computing; data and information resources; online instruments and observatories; and visualization and collaboration services. Cyberinfrastructure enables distributed knowledge communities that collaborate and communicate across disciplines, distances and cultures. (National Science Foundation 2007)[4]

This NSF report basically formulates four key areas, which were to be urgently dealt with in the period from 2006 to 2010: (1) "high performance computing"; (2) "data, data analysis and visualisation"; (3) "virtual organisations for distributed communities"; (4) "learning and workforce development." In academic projects "cyberinfrastructure" was primarily to be used in the development of technological processes, in order to approach a solution for the problem of efficient and meaningful networking of data, computers and people with the aim of generating new academic

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[4] A further central report assigns the "cyberinfrastructure" a role within the humanities and social sciences, cf. American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences: Our Cultural Commonwealth. The Report of the American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences. 2006. URL: http://www.acls.org/uploadedFiles/Publications/Programs/Our_Cultural_Commonwealth.pdf. Last accessed 27 Aug 2014.

theories and knowledge. With libraries, archives and museums, systems had already been established over centuries to make finding information possible; only bibliographies, finding aids, citation systems and concordances are mentioned here. In publications, too, this information was made available, thus linking the publishers, librarians, archivists and curators with the researchers.

While the existing academic infrastructure was established over a period of centuries as an active participant in "science", "cyberinfrastructure" developed much faster and more abruptly. For this reason, the NSF has considered it important to involve academics in this process right from the start. Even though this refers only to the American initiative, there are tendencies that may be seen within the framework of the European Union, for example, the construction of the "Europeana" Internet platform with all its subprojects, in particular, at the present time, with the "Horizon 2020" programme.[5]

In this context, the humanities are called upon actively to articulate their requirements and to reflect on the form in which use of the new digital tools is meaningful. Up for discussion, among other things, is where and how, within the humanities, quantitative data may be determinative and meaningfully depicted, alongside the qualitative. The Internet as the bearer of hope for the swift location of publicly accessible information, linked to correct and relevant metadata, is also a great opportunity for humanities scholars, for it is appropriate to develop ontologies and to collaborate on new classifications and standards for the management and utilisation of data records.

In order to be able to arrive at a more precise assessment of what such a contribution could consist, the ACLS was assigned to deal with the specific requirements and tasks of scholars in the humanities and social sciences. The humanities could and should make an active contribution. Their role as a reflective discipline was recognised, for:

> after all, science – whose goal is predictive certainty – only has half the picture. Uncertainty (or ambiguity, if you prefer) is the other half, and the humanities and social sciences celebrate that, explore it, tolerate it, and understand it better than the sciences do. Or, at another level, if science and engineering are about what we can do, the humanities and social sciences are about what we should do. (Unsworth: 2004)

The humanities were thus perceived and confirmed as an important contribution to the solution of urgent societal problems, for "the study of history, literature, languages, philosophy and other humanities subjects help us not only to better understand our own nation, but other cultures as well" (ibid.). This may be read as a deft line of argument in a globalised world, which is dependent on understanding between peoples and cultures. The dean of Library and Information Sciences at Brandeis University, John M. Unsworth, additionally states that computational methods have meanwhile come to occupy a fixed and meaningful place in the social sciences, which could in future be expanded in the area of research into the history of literature and art.

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[5] Cf. http://ec.europa.eu/programmes/horizon2020/. Last accessed 8 Aug 2018.

Unsworth goes further still and outlines a visionary image of a universally educated humanities scholar, adept not only within the sphere of that discipline but equally in technical knowledge. Only thus can one prevent, for example, that projects are carried on as pure product development:

> We will need English majors who have a background in logic, who can handle statistics, who do maths, if we are going to turn out a generation of disciplinary specialists who can bring the accumulated wisdom of the humanities to bear the computational contexts – perhaps in helping build ontologies for scholarly projects in disciplinary contexts, or building tools for data-mining in the context of humanities research. (Ibid.)

Ten years later, it seems that Unsworth's vision has arrived at international universities and extramural research facilities. Above all, it is in the USA that study programmes have been established that, among other things, explore the possibilities of using software and other technological products.[6] One could also mention Stanford University and King's College London, which are designing study programmes in the framework of digital humanities. With a slight delay, the digital humanities have also arrived in Europe. The foundation of the association Digital Humanities in the German-Speaking World (Dhd) in 2012 marks a milestone in the disciplinary entrenchment of the new subject within the universities and newly established research centres. At the same time, the Association for Literary and Linguistic Computing (ALLC), which had existed since 1973, changed its name to the European Association for Digital Humanities (EADH). The DHd's first conference in 2014 still tellingly bore the title "Digital Humanities – Bridge Building or Hostile Takeover?", while the second annual conference took place under the considerably more positive motto "From Data to Realisation: Digital Humanities as Mediator Between Information and Interpretation".

In the digital humanities, there is not yet a unity of opinion on whether it is sufficient for metalevel research if scholars understand computer software only to a certain degree. Lev Manovich, founder and director of the Software Studies Initiative in San Diego, is one of the few who speaks out explicitly regarding the necessity of practical training. In his opinion, humanities scholars should be capable, even without integration in interdisciplinary support programmes, of conducting certain analyses independently:

> if every data-intensive humanities project required a research scholarship that would make such a collaboration [between the humanities and information technology] possible, we would only be able to advance very slowly. We want humanities scholars to be capable of using data-analysis and visualisation software in their daily work, in order to be able to combine quantitative and qualitative methods in their work. How we get to that point is one of the key questions for "digital humanities." (Manovich 2014: 81)

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[6] Lisa Spiro, director of the National Institute for Technology in Liberal Education (NITLE), has put together a very useful document in this context: it lists useful addresses and institutions on topics from workshops, tutorials and best practice documents to the planning of one's own projects (cf. Lisa Spiro: Getting Started in Digital Humanities. In: Digital Scholarship in the Humanities, 14.10.2011. URL: https://digitalscholarship.wordpress.com/2011/10/14/getting-started-in-the-digital-humanities/. Last accessed 8 Aug 2018.

In accordance with this idea, he teaches these areas at the City University of New York (CUNY). Manovich's view is also shared by important American funding bodies. The director of the Office for Digital Humanities at the National Endowment for the Humanities, Brett Bobley, thus went on the record that he would like to see more practical exercises in "digital tools and methodologies for humanities scholarship" (Gavin, Smith 2012: 64) and posed the question: "How many graduate humanities programs include classes on using GIS, 3-D modeling, data analysis, or other methods of scholarship?" (Ibid.) A proposal by film scholar Nick Redfern, in support of basic statistical training in film studies, points in the same direction (2013: 60). He attaches importance to the statement that it is not sufficient to train the students to be users of statistics programmes; statistics, rather, means critical thinking in a comprehensive sense. One could classify Manovich's courses as part of this direction, including, as they do, not only practical exercises within the study plan but also principle questions regarding the presentability of data and, not least, aesthetics. When one reads the theses of the working programme for the further development of the DHd into the year 2020, it is not quite clear, however, whether the digital humanities are to be seen as an applied branch of information science or still as part of the humanities.

> 1.1 The digital humanities enrich the traditional humanities conceptually and methodologically – their tools and methods complement the "how" of our practice with an empirically oriented epistemology.
> 1.2 For all their methodological and theoretical claims, the digital humanities are nonetheless characterised by a pragmatic orientation. The development and preparation of tools of information technology are therefore among their central features. (DHd 2014)

The debate within the digital humanities as to *which* branch of information science could best be deployed here, or whether one is once more dealing with a new discipline, continues controversially, as was impressively shown by a disputation in the framework of the first DHd conference in 2014. One of the protagonists was Manfred Thaller, professor of Computer Science for the Humanities at Cologne University, who represented innovative propositions about the positioning of the humanities towards information science. Text-based research is for Thaller only one of four areas in which he sees potential for cooperation between the humanities and information science. Further sub-groups are factual analysis, the analysis of non-textual information in its broadest sense (this subsumes audiovisual data) and "humanities computer science" (Thaller 2014). Thaller is also doubtful that computer linguistics/corpus linguistics/text mining can be included in the digital humanities: "There are, rather, good reasons to assume that they constitute their own discipline, the methods of which, while certainly useful for the digital humanities, can on no account be considered part of its core" (ibid.).

The new assignment of the name digital humanities can be seen not only as an application of computer technology in the humanities but also as a step towards integration. This goes with a revision of the traditional humanities, the methodological strengths of which are "attention to complexity, medium specificity, historical context, analytical depth, critique and interpretation" (Schnapp, Presner 2009). The conventional institutions and paths of transmitting knowledge are adjudged by the

"Digital Humanities Manifesto" as no longer up-to-date; they must face up to the changes in the academic environment: "Today the old theory/praxis debates no longer resonate. Knowledge assumes multiple forms; it inhabits the interstices and criss-crossings between words, sounds, smells, maps, diagrams, installations, environment, data repositories, tables, and objects" (ibid.). The digital humanities have thus entered a phase of critical self-reflection regarding their field of research and their academic practices. David M. Berry prognosticates about the direction the development will take: "Indeed, we could say that a third-wave digital humanities points to the way in which digital technology highlights the anomalies generated in a humanities research project and which leads to the questioning of the assumptions implicit in such research, for example close reading, canon formation, periodisation, liberal humanism and so forth" (Berry 2012: 5).

What can here already be heard, even if it is not explicitly said, is the circumstance of having for the moment reached the end of the pioneering era, in which the most varied projects and initiatives were welcome (a "big-tent" approach). The trend towards a large number of very varied contributions is presently still continuing, a fact which is correctly seen as problematic. Not only does one lose an overview of conferences and publications, there is also a risk of academic discussion becoming bogged down, as the individual areas are so widely dispersed. An additional problem that should not be underestimated is the choice of suitable peer reviewers who possess the requisite knowledge of the subject, in order to be able to judge the quality of specific themes (Terras 2014: 268).

On the other hand, according to Berry (2012: 5), one meanwhile devotes oneself to the establishment of standards and best practice models, both in research and in the evaluation of knowledge. Not least, this brings with it a discursive convergence with the methods and approaches of the traditional humanities. It is about fundamentally understanding how processes of knowledge transformation in the twenty-first century can take place and be understood by means of computer technology and digitalisation. In doing so, interpretation must remain an important component of the discipline, for:

> What the community can do with the results of a digital humanities project is, like art, often outside what a creator or project team might have envisioned for it – and this is where the interpretation becomes important for multivalent digital humanities projects. What does it mean that a database has been structured in a certain way? What are the larger consequences for one design over another? How does a certain project push the boundaries of what we consider acceptable digital humanities work? How can new analytical processes or methodologies be applied in different contexts? These are subjective and interpretative questions that we must openly discuss. (Gibbs 2012)

Whether one smiles at the new discipline, greets it enthusiastically or simply ignores it, it may be stated that in the last several years, a revolution in the acquisition, transmission and storage of knowledge has been on the march, the effects of which we are already feeling: in the funding programmes of the EU or national sponsors and in the open-access movement or the development of the Semantic Web. Against this, the academic structures have remained relatively immobile. The call to the universities made by Schnapp and Presner to tread a productive path to

collaboration with nonacademic institutions and break up the traditional hierarchies can be seen as an example for the innovative demands that are valid for the new discipline.

> The Digital Humanities seek to play an inaugural role with respect to a world in which universities – no longer the sole producers, stewards, and disseminators of knowledge or culture – are called upon to shape natively digital models of scholarly discourse for the newly emergent public spheres of the present era (the www, the blogosphere, digital libraries, etc.), to model excellence and innovation in these domains, and to facilitate the formation of networks of knowledge production, exchange, and dissemination that are, at once, global and local. (Schnapp, Presner 2009)

Both authors correctly point out that research certainly takes place in libraries and archives and that these have their own well-functioning networks for the exchange of information. Unfortunately, the traditional hierarchies are still very strongly anchored in people's consciousness, for example, according to Schnapp and Presner, because the modern university separates research from curation. Curation is thus assigned only a secondary, supporting role, and in this way, curators within the museums, archives and libraries are "sent into exile" (ibid.). In contrast, the digital humanities expressly call for a new definition of the "scholar as curator and the curator as scholar", (ibid.) which should include the academic activities of institutions such as museums, libraries and archives. Despite the noble claims of both authors, the roles continue to be assigned in a relatively fixed manner, and it is apparently still difficult to consider extramural research. This partially also unconscious exclusion is one that I have already dealt with elsewhere in the context of the situation in film archives and libraries (Heftberger 2014; Heftberger 2018b).

The Digital Humanities in Film Archives and Libraries

The long-term networking of academics with librarians and specialists in the field of information technology is an explicit formulated goal of cyberinfrastructure. The emphasis has hitherto been on text-based artifacts, but the establishment of networks for electronic resources or for management, for exchange and for optimisation of metadata in different fields has also been promoted. Archives and libraries already increasingly use digital tools in order to present parts of their collections meaningfully on the Internet and thus also provide the public with the possibility of searching and researching in their holdings.[7]

In the meantime it has become possible to annotate video files, to provide them with keywords to the precision of a frame, to furnish them with geographical data and to comment on them in free text. The most diverse web applications and database systems are used and developed, which makes it difficult, in these already relatively

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[7] For example, the project BFI Filmography at https://filmography.bfi.org.uk/, where filmographic data can be visualised. Last accessed 8 Aug 2018.

unstandardised areas, to establish internationally binding standards (metadata, codecs, etc.). Research can take place at the level of content but also at the levels of metadata generation and meaningful web presentations.

Film archives are, depending on their type and national conditions, organised in very different ways. For the most part, however, a division of roles has emerged which differentiates between technical expertise and work with content. Even if this is a gross oversimplification, this differentiation is even more strongly pronounced in the Anglo-American film archives than in those of Eastern Europe, which normally employ a relatively large number of academic staff. Although the term digital humanities is – compared to many libraries – scarcely an issue in film archives, it may be assumed that there, too, a greater permeability between the areas of responsibility is to be expected in the future. It is already the case that different fields are no longer as sharply delineated from one another, as digital data management cannot be restricted to one area of material (e.g. films, photos or documents) and metadata must be managed across the boundaries between collections, among other reasons in order optimally to use technical infrastructures and personnel resources. A great step forwards in the standardisation of metadata necessary for this has been made in recent years, of which more later.

The subdivision into "digital" on the one hand and "analogue" on the other makes, to put it provocatively, no sense anymore, and the traditional image of archivists, too, bringing down reels of film from shelves, is included in the rapid transformation. This applies above all to the staff of audiovisual archives, in which the entire field is still in need of definition, according to Martin Koerber, head of the film collection at the Stiftung Deutsche Kinemathek:

> Compared to other heritage archivists, audiovisual archivists, and audiovisual restoration experts in particular are still in a minority position. Often their demands to be accepted as heritage specialists go unappreciated by their institutions and by the heritage fields as a whole. Audiovisual archivists have yet to define their field, and due to the continuing technological change, to constantly redefine who they are and what they do will be a key challenge for the foreseeable future. (Koerber 2013: 46)

The borders between university research positions and curatorial professions in the archives or extramural facilities, which can no longer be so clearly demarcated, have also already been dealt with in the aforementioned "Digital Humanities Manifesto 2.0". Curatorship is there defined as follows: "Curatorship means making arguments through objects as well as words, images, and sounds" (Schnapp, Presner 2009). Although a similar process of "spatialisation" is taking place here as in the humanities, above all in history, there is still a fundamental difference. Instead of working with language, one works with space, in which physical or virtual objects are arranged. In spite of that, the authors emphasise the similarities and the potential that just such a self-transforming environment can have for a mutual exchange of impulses:

> It means becoming engaged in collecting, assembling, sifting, structuring, and interpreting corpora. All of which is to say that we consider curation on a par with traditional narrative scholarship. It is a medium with its own distinctive language, skill sets, and complexities; a medium currently in a phase of transformation and expansion as virtual galleries, learning environments, and worlds become important features of the scholarly landscape. (Ibid.)

But we can and should not restrict the process of curation only to the assembly of a film programme or an exhibition. It could be expanded to the identification, cataloguing and online presentation of archive material such as films and photos from the collections. It is precisely the identification that is often a slowly and sometimes also frustrating process, as personnel resources are limited and specific expertise and the necessary time are lacking. For this reason, film archives with interesting online projects have turned to the public, in order to be able to obtain expertise from specialists outside the institution and beyond the national borders as well. As examples of such crowdsourcing initiatives, one could mention the Deutsche Kinemathek's ambitious LOST-FILMS project[8] or the Austrian Film Museum's Schlemmer frame collection.[9] From experience, one can say that a relatively high investment (including financial) is linked to projects such as those mentioned. There is also the risk that identical documents in other institutions have been digitalised and put online with the same intentions without being linked or displayed in a search. The digital humanities could serve to provide an important aid to archives, ensuring and optimising the collection and exchange of information. The generation of metadata or the location of similar subjects across databases and collections could benefit in like manner. Researchers are often interested in specific people, objects or activities that appear in films. In the current environment, the answering of such requests is a task that can scarcely be resolved for archive staff. Apart from personal knowledge, which may naturally be very comprehensive, there are hardly any aids. To formulate it exaggeratedly, a curator who can simultaneously develop digital tools is a dream of the future but would be a desirable enrichment.

This naturally raises the question of where students should acquire the kind of knowledge that embraces both the science of materials and film-specific computer-technical abilities. Much of it can only be acquired through long years of experience. Other parts of it, for example, skills in digitisation, databases, programming or text mining can perhaps not even be covered by university studies in the archival or library fields (even should the will be there) (also Heftberger 2018a).[10] Julia Flanders of the Brown University Library describes, in her informative article "Time, Labor and 'Alternate Careers' in Digital Humanities Knowledge Work", an additional phenomenon: "Most digital humanities work, however – as performed by library staff, IT staff, and other para-academic staff who are not faculty – is conceptualized according to one of the other models: hourly, by FTE, or as an agenda of projects that granularizes and regulates the work in quantifiable ways" (Flanders 2012: 303).

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[8] See https://www.lost-films.eu/. Last accessed 8 Aug 2018.

[9] See https://www.filmmuseum.at/en/collections/special_collections/schlemmer_frame_collection. Last accessed 8 Aug 2018.

[10] One could, at any rate, mention the information and library science courses at the FH Potsdam and the HU Berlin, which, however, do not specialise in film, as well as those at the Film University Babelsberg *KONRAD WOLF*, the Goethe University in Frankfurt am Main, the HTW Berlin and Amsterdam University, which all have different areas of specialisation.

She points out the circumstance that there is a tendency in extramural institutions to define assignments in the framework of digital humanities (e.g. databases, online presentations, also perhaps long-term archiving) as projects and to farm them out to third parties. Although such a procedure is understandable, a chance is being missed: the opportunity to build in-house resources which would also enable engagement with collection content alongside the digital infrastructure and information management. Conversely, there are many academics who have in the meantime acquired a technical competence especially for humanities problems. In both cases, important knowledge is always being removed from the institution when the project is completed and must then be "purchased" again.

To sum up, and in reference once more to Schnapp and Presner, one could say that the ideas in the manifesto are illuminating and perhaps even revolutionary, especially as far as the redefinition of the relationship between universities and other knowledge-producing institutions goes. However, a realistic look at the situation shows there is room for improvement. The same goes for the democratic call to break up long-established hierarchies, for example, through the integration of independent researchers. The current debates in the digital humanities do not necessarily seem to be particularly interested in these topics but are devoted more to the question of academic publication possibilities in the digital age, the staking out of disciplinary boundaries and overlaps with the traditional humanities or methodological discussions, such as quantitative analysis versus hermeneutics. Although the importance of such questions is not disputed, the inclusion here of new partners in the discussion could be fruitful.

Big Data: Distant Reading

Digital collections, as they are today, alter not only the individuals who deal with them; they "also deliver destabilising quantities of knowledge and information which lack the regulatory power of philosophy – which, as Kant explained, guarantees that institutions remain rational" (Berry 2014: 53). If we understand Berry to mean that the digital humanities are called upon actively to accept the so-called big data,[11] this is not without practical obstacles, depending on which data interest us (Manovich 2014: 79). Whether the humanities can really design a philosophy which – and this is the crux – can also show a regulatory effect outside the academic world is doubtful. There are already too many economic interests involved which manage the collection and storage of "social data". Even though on the one hand there is a sheer oppressive overflow of data, the demand nonetheless virulently continues for more digitised documents, including those of the film heritage. In this

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[11] For a definition cf. https://en.wikipedia.org/wiki/Big_data. Last accessed 8 Aug 2018, Manovich also refers to Wikipedia.

book I shall be discussing only a small part of the available volume of data and concentrate more on why there are reservations in the humanities about going from a "close reading" to a "distant reading" or to use both in parallel.

The technical possibilities for computer-aided analysis and perhaps even interpretation represent a radical innovation for the humanities. Still more radical is the approach of analysing not one work after another but hundreds or even thousands of human creations simultaneously and at a speed no human could achieve. Parallel to this is a variety of methodologies, in which interdisciplinary approaches mutually stimulate and complement each other. The nature and extent of human participation in digital humanities projects is therefore the subject of controversial discussion within the humanities. For her overview article "How We Think", the literature scholar N. Katherine Hayles interviewed her colleagues about the possibilities and limits of the digital humanities. The author wanted to find out how the use of digital technology influenced and changed the thinking of her peers in the humanities. Hayles was interested above all in the changes in the individual conditions of work in the framework of the respective university environments: "How engagements with digital technologies are affecting the assumptions and presuppositions of humanities scholars, including their visions of themselves as professional practitioners, their relations to the field, and their hopes and fears for the future" (Hayles 2012: 42). Hayles considers the results, which took a variety of forms, astounding and arranged them in large units: scale, critical/productive theory, cooperation, databases, multimodal scholarship, code and future trajectories (ibid.: 43).

For Hayles, the statements dealing with "scale" were in this context the most important. An autocatalytic process was already set in motion by the mere fact *that* we use digital technologies: "The more we use computers, the more we need the large-scale analysis they enable to cope with enormous data sets, and the more we need them, the more inclined we are to use them to make yet more data accessible and machine-readable" (ibid.: 48). Without evaluating, Hayles describes databases as the cultural expression of the new era, which transforms itself in a similar fashion to them: "Databases are not necessarily more objective than arguments, but they are different kinds of cultural forms, embodying different cognitive, technical, psychological and artistic modalities and offering different ways to instantiate concepts, structure experience, and embody values" (ibid., also Vesna 2007).

The basic tendency within the digital humanities, to grasp the object of research, among other things, as quantifiable, analysable and visualisable elements of data, would appear to contribute to the impetus of the new discipline. At least in American universities there are already signs of a desire for an improvement in the testability of statements in the humanities. A polemic commentary by the philosopher John Holbo could be seen as a representative of the current atmosphere: "If the answer is that literary scholars take the undesirability of quantification for granted, whereas everyone else takes its desirability for granted, the literary folks are flat out of luck" (Holbo 2011: 9).

With the volume of data that is suddenly available, the potential questions that can be directed at the material are multiplied. Theoretically, many sources are meanwhile available with which to support or falsify theses. The choice of scale for the penetration of an area, as already mentioned, also plays a large role; for Hayles this is a good opportunity to rethink established "bad habits" in everyday university life. She criticises the college practice, widespread at American universities, for the same books always to be placed on the reading lists for literature study. This could lead to a loss of the knowledge of how the "canon" is to be distinguished from "normal" literature, as it is precisely because of its unusual construction that it was singled out. Hayles' criticism is not directed at the fact of the reading being restricted to a small number of selected works but at the fact that in consequence the questions raised become similar. Computer-aided analysis could potentially open other perspectives, as the body of work is more extensive.

> Someone who has only read those texts will likely have a distorted sense of how »ordinary« texts differ from canonized works. By contrast, as Gregory Crane observes, machine queries enable one to get a sense of the background conventions against which memorable works of literature emerge. Remarkable works endure in part because they complicate, modify, extend and subvert conversions, rising about the mundane works that surrounded them in their original contexts. Scale changes not only the quantities of texts that can be interrogated but also the contexts and contents of the questions. (Hayles 2012: 46)

One of the most vehement and polemical advocates for dealing "rationally" with works of art is the literature scholar Franco Moretti. He expressed himself clearly in favour of a formal quantitative approach in literary research, encompassing both computer-aided statistical evaluations and thematic data collections. In this context, one of his key terms is "international cooperation", for without it, according to Moretti, quantitative work is simply inconceivable. Not only because the task of creating all the records with one's own labour would be interminable but also because the data is in this way independent of the person who created it (Moretti 2007: 5). In his opinion, data acquisition must initially be independent of any interpretative propositions. At the same time, what is also being called into question is one of the most privileged terms in the humanities – the process of reading. For Hayles the question arises of the extent to which one can also speak of an algorithm as a form of reading. One of the most radical pioneers of the digital humanities is the philosopher of science Timothy Lenoir, for whom a computer programme is better than analysis by a human, as no preconceived opinions filter the "material", culminating only in the expected results. Any human intervention, according to Lenoir, is less expedient, if what one seeks are objective results. As he himself polemically puts it: "I am totally against ontologies" (Hayles 2012: 46). Algorithms, however, are written according to previously determined categories.

Moretti pits the traditional perusal of "close reading", that is, the thorough and detailed reading and understanding of a text, against his concept of "distant reading". He is primarily interested in literary processes over large periods of time, for which he gathers individual data in a graphic representation. Thus, for example, a change of method is required in order to be able to research nineteenth-century English literature at all, for a "field this large cannot be understood by stitching

together separate bits of knowledge about individual cases, because it *isn't* a sum of individual cases: it's a collective system, that should be grasped as such, as a whole" (Moretti 2007: 4). More concretely:

> The trouble with close reading (in all of its incarnations, from the new criticism to deconstruction) is that it necessarily depends on an extremely small canon. This may have become an unconscious and invisible premise by now, but it is an iron one nonetheless: you invest so much in individual texts only if you think that very few of them really matter. Otherwise, it doesn't make sense. And if you want to look beyond the canon (and of course, world literature will do so: it would be absurd if it didn't!) close reading will not do it. It's not designed to do it, it's designed to do the opposite. At bottom, it's a theological exercise – very solemn treatment of very few texts taken very seriously – whereas what we really need is a little pact with the devil: we know how to read texts, now let's learn how not to read them. Distant reading: where distance, let me repeat it, is a condition of knowledge: it allows you to focus on units that are much smaller or much larger than the text: devices, themes, tropes – or genres and systems. (Moretti 2000)

Moretti by no means seeks to propagate "distant reading" as the only mode of access: "It may well be that the study of literature will always require, or be enriched by, both close reading and abstraction, interpretations and explanations; but this will amount to saying that literature requires two conceptually opposite approaches" (Moretti 2011: 74). A heated discussion swiftly arose around his book *Graphs, Maps, Trees*, leading to a publication in which various positive and negative opinions are collected. Not only the actual theses of the author and his concrete examples from the history of English literature are dealt with in *Reading Graphs, Maps, and Trees*; beyond that the arc of the discussion spans far further and touches upon fundamental questions of the transmission and communication of knowledge in research.

A large part of the debate revolves around the way in which Moretti's book uses graphs, intended to serve as visualisations of the geographical and historical appearances of literary genres. Beyond that, the author also brings up larger questions of politics and society in the context of these diagrams. It is precisely this for which Moretti has been much criticised, though perhaps also because he himself has not (yet) succeeded in delivering any particularly convincing contributions to the history of English literature. Overall, he remains too vague, drifting off into sociological explanatory models, and is, unfortunately, not very profitable when it comes to concrete suggestions of visualisation. In addition, Moretti must make his peace with the charge that his approach is almost more "theological" than scientific. Interestingly, criticism of Moretti's researches is often expressed in a very personal or polemic way, as in the case of the literature scholar Elif Batuman, whose humorous essay "Adventures of a Man of Science" in the magazine *N + 1* gives her impressions from seminars and encounters with Moretti (Batuman 2005). That Moretti's theses nonetheless do resonate with a broader public is made clear by an article in *The New York Times* (Schulz 2011).

At the same time, academic results are in principle not always ideally communicated, as Holbo states: "It seems to me, to repeat, that the oddity of the deep incommunicability of results, within a large academic discipline – the lack of portability of the products across vast fields and subfields – should strike us more than it tends

to. If it did, we would welcome projects like Moretti's more eagerly" (Holbo 2011: 6). In his defence of Moretti, the author is above all concerned with the fundamental possibility of meaningful summary and addition in the argumentation of academic literary studies through data or graphics. In particular, Holbo speaks about the overall presentation of the English novel, for example, Jenny Davidson's *Breeding: A Partial History of the Eighteenth Century*. He praises the book first for its informative character but notes that precisely a work with this focus would benefit from Moretti's approach. One senses a certain "tension" in Davidson's methodology and more still in her own problematic attempts at classification and originality. Holbo finds Moretti's relatively modest approach much more to the point (ibid.: 11).

Moretti comes out in favour of the observation of long cycles and for a theory of diversity. For him, objective data can falsify existing explanations. For that reason, one must strive for a theory that is no longer concerned with *the* novel but one which turns its attention simultaneously to a whole family of genres and thus create a theory of diversity (Moretti 2007: 30). His support in this comes also from other subject areas, for example, from the statistician Cosma Shalizi, who writes about the checking of hypotheses:

> Checking hypotheses about causation, and still more about adaptation, is really hard; with just one case, arguably hopeless. What you need is the ability to reliably detect departures from the hypothesis, if they are actually present – "power," in the statisticians' jargon. It is hard to get much power when n= 1. If you want to claim that certain aspects of 19th century British novels were the way they were because those features fitted with ideologies of British imperialism – a fairly strong hypothesis about adaptation – I don't see how you can do it just by interpreting Mansfield Park, no matter how subtle and sophisticated your reading. (Shalizi 2011: 124)

The process of interpreting a work of art nonetheless remains the prerogative of the human brain, as do the questions that emerge as a result of the data material. In general, as far as the chances and boundaries of completely automated analysis go, I would agree with Manovich, who states: "A completely automated analysis of social and cultural data would today ultimately deliver no meaningful results, because the ability of computers to understand the content of texts, images, videos and other media is still limited" (Manovich 2014: 76). Interpretation is here not an uncontroversial term. The main representatives of cognitive film theory, David Bordwell and Kristin Thompson, give "explanation" priority over interpretation. Explanations can be on the one hand causal, on the other hand functional; while in the former case one asks why something happened, the functional explanation is about the purpose which something fulfills. If a person is part of the object of research, then the explanations will include aims, motives, means and purposes. In contrast to this, while a large part of media studies does stress the interpretation of films, the causal and functional processes are excluded (Bordwell, Thompson 2009).

For some scholars, the path to interpretation winds through indication and inspiration using new tools, such as numbers and visual representations, and contains the potential for possible interdisciplinary cooperation.

Literary scholars, however – here the force of Moretti's arguments make themselves felt – traditionally do not contend with very large amounts of data in their research. A significant component of our work is therefore basic research in the most literal sense: what kinds of questions do we seek to answer in literary studies and how can data mining help, or – more interestingly – what new kinds of questions can data mining provoke? (Kirschenbaum 2011: 33)

Whether and how "data mining" and visualisations are in fact meaningful and helpful in understanding larger contexts over longer periods of time, or also to display relations and functions in detail, probably remains a relevant and important task for the traditional humanities. For Berry, education remains a key concept, even in a data-centred world, in which participants are trained not only in the national library and literature cultures but are also later deployed to interpret larger information contexts, "which can unify the information that society is now producing at increasing rates, and which understands new methods and practices of critical reading (code, data visualisation, patterns, narrative) and is open to new methods of pedagogy to facilitate it" (Berry 2012: 14).

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Chapter 3
Annotation and Statistics

Statistical film analysis? That sounds like mathematics. How can one express a work of art as complex as a film is, on which many artists and craftsmen have worked, in numbers? (Birett 1988: 73)

An integral component of analogue film production from its beginnings has been its segmentary nature. In the first years of the cinema, around the time of the Lumière brothers, a film was usually only about a minute long, which corresponded to the length of a roll of film. A few years later, several smaller reels were already being assembled together, and the individual sequences, too, were no longer shot only in the chronology of the screenplay but increasingly from different points of view chronologically transposed. One reason for the break with chronological sequence was economic; in this way the classic Hollywood system became a leader in its efficient organisation of shooting (Bordwell et al. 1985). Already in the 1900s, the first films were produced with more than a single shot, in which one could, for example, insert close-ups as so-called cutaway shots, which enriched a linear narrative with important nuances. Among the earliest examples of films with more than a single shot are *Come Along Do*! (1898, R. W. Paul) and *The Kiss in the Tunnel* (1899, G. A. Smith) (Salt 1992a: 36). But it was only in the editing that one brought the individual pieces into the desired order, which could be a chronological sequence or not. This new freedom, to be able to arrange the individual sequences as one wished, encouraged experimentation on the one hand while on the other making a meaningful graphic depiction of the individual chronological and thematic segments a necessity.

The directors were already experimenting in the early cinema not only with the sequence of shots but occupied themselves also with additional technical possibilities for altering the chronology. Techniques such as fading in and out, dissolves, the insertion of intertitles or general special effects required the separation and splicing of the exposed negative film. These procedures were carried out either by the cameraman during shooting (in the camera) or, and this was normally the case, only during printing of the positive, carried out at a laboratory using a film printer.

With the establishment of the first film archives in the 1930s, the work on reels of film was finally transferred from the production studios and projection booths to another area. In the film museums and archives, the measurement and classification of the material, as well as its enhancement with metadata, now occupied the foreground. So-called editing tables, such as those manufactured by the Steenbeck or KEM companies, became further options, in addition to rewinders and projectors, for viewing the films on a larger screen, to run them at the appropriate speed and, if necessary, to stop them and rewind. It became possible in this way to study each individual frame, which for the first time enabled people who did not work primarily in film production to list individual shots and their lengths. An archive's own specific restrictions regarding access to and availability of film prints have always conditioned academic work. Although these limitations still hold today, the knowledge of the condition of what had come down was generally more fragmentary 30 or more years ago. One must therefore make allowances, for example, for the shotlists or lists of intertitles prepared in the 1960s. By contrast, internal archive documents for individual film prints are more significant and precise, especially those that were created as part of a restoration. Unfortunately, these have scarcely been made public or accessible for research. Nowadays films are still annotated for the most diverse research questions. By annotation, I refer in a general sense to a note as an explanation or addition to an already existing text, regardless of which medial form it takes (Hahn 2009: 130).

Annotation in the Project Digital Formalism

The interdisciplinary project Digital Formalism dealt, alongside its film historical research aspect, with more general questions of film notation, film annotation and the possibilities in principle for the transcription of filmic data, based on Dziga Vertov's films. Additionally, through the testing of self-defined categories, a corpus of data was to be assembled, on the one hand manually annotated, on the other automatically generated. The manual annotation of shot length was in principle mainly a question of counting the frames, digitally simulated. The procedure is the equivalent of the traditional method at the editing table or using a manual rewinder. In terms of automatic possibilities, discussion was to take place on whether computer-aided analysis can take on meaningful roles not only in the study of Dziga Vertov's work but in film studies in general. The use of archive material poses, for example, problems for automated, computer-aided analysis that arise from the poor condition of the material (Zaharieva et al. 2010). However, there were also positive results: on the basis of *Man with a Movie Camera* (1929, Dziga Vertov) and *Enthusiasm* (1930, Dziga Vertov), the computer scientist Maia Zaharieva carried out computer-aided comparison of versions that were considered very satisfactory (Zaharieva, Breiteneder 2010).

The corpus of work consisted of Vertov's feature-length films, as preserved in the Austrian Film Museum in Vienna. They were first digitised and subsequently annotated frame by frame. The digitisation of silent films using a telecine, which
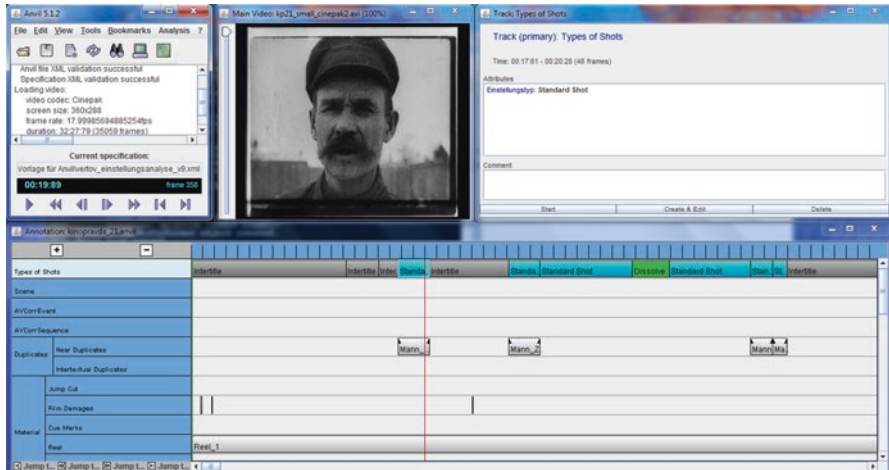
Fig. 3.1 Anvil software user interface, example: *Kinopravda No. 21*

must precede a computer-aided annotation, is itself not unproblematic. It is a process in which it is not each individual frame that is digitised but in which the original is subjected to a continuous scanning. This procedure comes originally from the field of television. As the equipment used has as its standard setting 25 frames per second (fps), for films that are to be run at 18, 20 or 22 fps, interpolated images are produced (either by frame blending or frame duplication). For an examination that is to be precise down to the frame, if every video image should correspond to a frame of the film print, that is not acceptable. Therefore, individual images from the 25 fps digitised file are subjected to a calculated deduction so that it may then be played at 18 fps in the annotation programme.

For the annotation of the films, Anvil software was used, for which an annotation template individually designed for the project was created (Fig. 3.1). Anvil was developed by Michael Kipp,[1] who wrote his dissertation on the analysis of gesture (Kipp 2003). When the project began, several options were under discussion, for example, Videana (developed by Ralph Ewerth) or AKIRA (developed by Rolf Kloepfer). Both systems had been presented at the conference "Digital Tools in Film Studies" at Siegen in 2007 (Ewerth et al. 2009; Kloepfer 2009). At the time, commercial software programmes were also already available, which, however, could not be considered for the project for reasons of cost. The free Anvil software was originally developed for the analysis of gestures but was suitable for the purposes of the project and simple to adapt. The annotation template can also be used for other films; the only problem with that could be the type of video format used, which is not a problem specific to Anvil, but is endemic to a time in which the rapid change of video formats is routine.

In the development of meaningful parameters for an annotation of Vertov's films, one orients oneself on the one hand towards classical formal terms of film analysis, on the other to specific categories which can be isolated especially in the case of this

[1] Cf. www.anvil-software.de. Last accessed 8 Aug 2018.

director. The customary formal parameters of film analysis, such as shot, camera movement or shot size, were thus to be utilised. All deviations from them had to be pragmatically dealt with: dissolves were classified as equal parts of the previous and subsequent shots, fade-in and fade-out became their own shots, while complex transitions were divided between both affected shots. These parameters were required not only by the participating film scholars but also by the project partners from the Technical University of Vienna as a so-called ground truth for checking the algorithms they had developed. In addition, notes with relevance in the archival and material-technical sense (e.g. cue marks) were to be retained, and the specific research interests of the individual project staff members were to have a place in the annotation. For this purpose, an attempt was made to define terms from the Vertovian terminology that were then annotated in the respective films. Alongside the descriptive tracks, the annotation template also includes interpretative tracks, which permit additional semantic or temporal units. The metadata from the annotation was saved as xml files and could be exported via Matlab into Excel, for example.

The shot was always the basis of the annotation. This be can defined with a starting and ending point and subsequently assigned to a shot type. If one still wants to be "strict" in adhering to terms from classical film analysis, historical and heterogeneous material will quickly lead to problems. On the basis of the term shot, the film scholar Anton Fuxjäger has drawn attention to the problematics of its use in the annotation of Vertov's films, especially in the case of *Kino-Eye* (Dziga Vertov, 1924) (Fuxjäger 2009). The traditionally used definition of a shot as what takes place between two hard cuts does not leave much room for manoeuvre in describing more complex transitions from one shot to another. An example that illustrates this problem may be seen in Fig. 3.2, where the silos of the state trade organisation (Gostorg) are visually combined with the transport of the goods.

When dealing with a very complex transition from one shot to the next, the dissolve would be demarcated from the previous and subsequent shots and defined as a shot of the type complex transition. With this compromise solution, which followed the requirements of the computer scientists while allowing the freedom for itemising according to individual research interests, a meaningful annotation was possible.

As the first category, the type of shot was registered, with a classification choice made from the following and the possibility of making an entry in the first annotation track (Fig. 3.3): (1) standard shot, (2) intertitle, (3) animated intertitle, (4) animated cartoon, (5) object animation, (6) black frames, (7) multiple exposure, (8)

Fig. 3.2 Complex transition between shots, for example, *A Sixth Part of the World*

multi-image/split screen, (9) dissolve, (10) fade-in, (11) fade-out, (12) bar wipe, (13) iris in/from black, (14) iris out/to black, (15) iris in/not black, (16) iris out/not black and (17) complex transition.

The next category bears the designation duplicates, the results of which are itemised in the second annotation track (Fig. 3.4). This is further differentiated into near duplicates and intertextual duplicates, the first term from information science and the second created for the project. For the project annotation, it was determined that near duplicates would mean identical shots within the film, whereas intertextual duplicates would be used for those shots that appear in other Vertov films. In computer science, near duplicates refers to general entities which, because of their qualities, are similar to other entities. It is possible to programme algorithms for analysis of both verbal and visual similarities (web crawling or video analyses are examples) (Ke et al. 2004). The discussions held by the project team make it clear that the narrowly formulated technical term can certainly be developed further for film analysis. It is precisely with a director such as Vertov, who expressly reuses material in his own films and works with strong visual similarities in his pictorial composition that the potential exists for expanding to a multilevel near-duplicate term, from the simplest case to the most abstract (Zaharieva 2011; Zeppelzauer, Mitrović 2011). A

Fig. 3.3 Track 1, for example, *Kinopravda No. 21*

Fig. 3.4 Track 2, example: *Kinopravda No. 21*

three-rung model is conceivable (near duplicate of first, second and third order), which could profitably be used in future investigations. Starting with an identical shot, frame or sequence (first order), identical shots, frames or sequences originating in the same camera take but edited into the montage at points distant from one another can be thus itemised (second order). In the last category (third order), visual similarities of either a semantic or a formal nature can be itemised. However, for a meaningful and goal-oriented investigation, one should begin by discussing the specific methods of the director in question. The precise and repeated viewing of the material, as well as the film-maker's writings and the historical context, provides the most appropriate stimuli for this.

In the third annotation track, technical details of the film material are noted, such as frame jumps, film damage and cue marks (Fig. 3.5). At this point one must specify that these notes deal with the prints preserved at the Austrian Film Museum. These prints bear the marks of time, i.e. the cue marks could be printed in, stencilled in or scratched in. This information can usually be obtained from the video file, but sometimes it is nonetheless necessary to inspect the film material for this purpose. This is above all important in the case of cue marks, as indications can be found at the beginnings and ends of the physical film reels. Although, for reasons of time, these categories were not utilised to the full, there is here nonetheless a great potential for a future reform of archival reporting on film material, which in film archives to a great extent still involves writing on paper and index cards.

The fourth annotation track was used for recording instances of text in the image, which incorporates both superimposed and diegetic text (Fig. 3.6). Diegetic text means that text structures are a component of the world depicted in the film, for example, signs, inscriptions or posters.

In a similar way, the fifth annotation track was used to note speech, music, sound effects and audio motifs that transcended shots and sequences (Fig. 3.7). Here it was possible to annotate recurring or central acoustic motifs. The correlation of
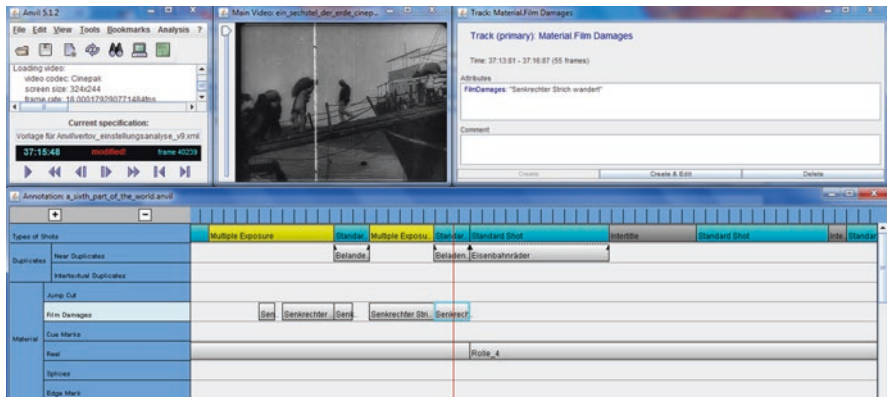

Fig. 3.5 Track 3, example: *A Sixth Part of the World*

acoustic and visual motifs was a research focus for the automatic analysis on the part of the technical partners; thus a single-case study on this subject exists, using the example of *Enthusiasm*, conducted by Matthias Zeppelzauer et al. (2011). The computer scientist Matthias Zeppelzauer argues that Vertov used the process of synchronised image-sound montage in order to increase the tension of the film and that this can be isolated by means of computer-aided analysis. As a first step, the points in the film where such relationships can be determined were manually localised and annotated. These results were used as the basis for the programming and optimisation of the automatic analysis and the results compared with one another. It was precisely the necessary inclusion of the semantic content ("high-level video abstraction") that greatly challenged the algorithms (ibid.: 6). From the film-historical perspective, one could nonetheless sceptically remark that this film in particular
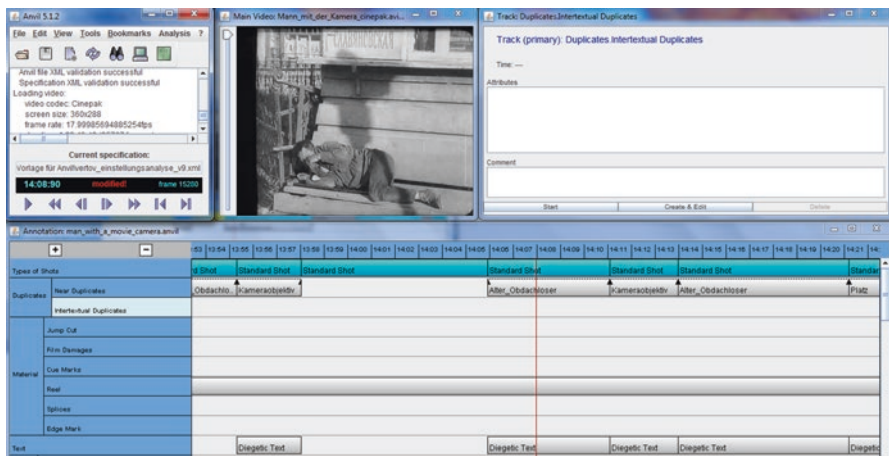

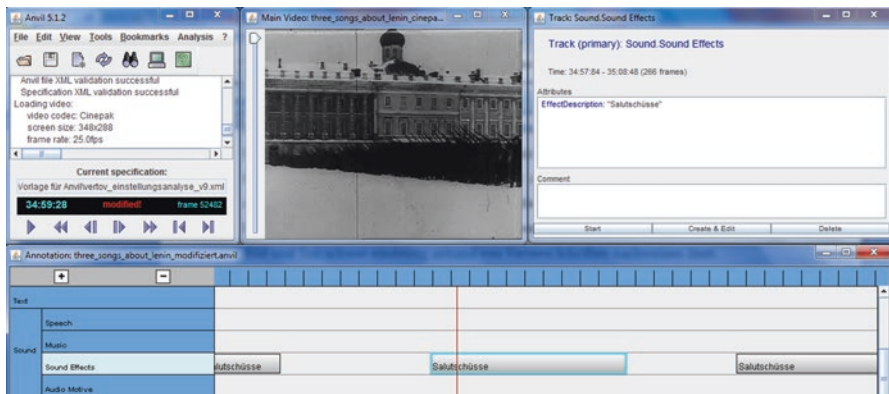**Fig. 3.6** Track 4, example: *Man with a Movie Camera*

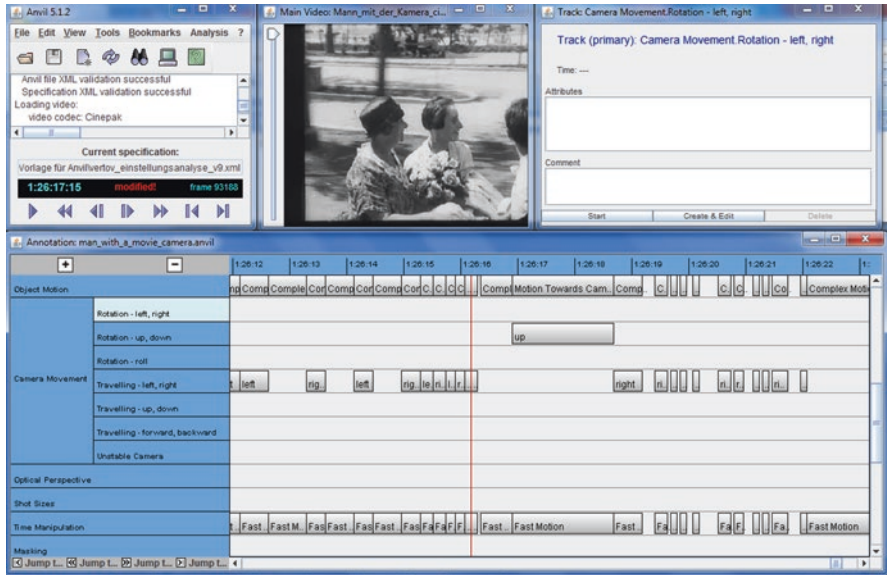**Fig. 3.7** Track 5, example: *Three Songs of Lenin*

Fig. 3.8   Tracks 6 to 11, example: *Man with a Movie Camera*

demanded special consideration of the state of its preservation, i.e. the thesis of intended synchronicity of image and sound cannot be supported unambiguously by Vertov's writings.

As a further central annotation category, the movements of objects and the camera were noted (Fig. 3.8). This involved describing the movements of the main objects in the image according to the direction and intensity of the movement and entering it in the sixth annotation track. Naturally it was necessary here to make a decision regarding the object to be described, which had to adhere to pragmatic considerations. Semantically relevant events were mainly used for the description. The movement of the camera was recorded using the categories rotation (left, right, up and down), travelling (here additionally forwards and backwards) and unstable camera and noted in the seventh track. The separation between the movement of objects and that of the camera raised difficulties not only for the human observer but also for automatic detection. For while a person can at least find clear indications in the semantic context, these remain inaccessible (for the time being, at least) to an algorithm. Although the movement of objects could be painstakingly noted according to compass points (with precise gradations in every direction) and in relation to the camera (towards the camera and away from it), this category could not be automatically evaluated. In a further category, the tilt angle of the camera could be specified, in order to note views from below or above (in the eighth annotation track). It was also possible to record shot size in the ninth track; this enabled arrangement according to close-up, medium shot, medium long shot and long shot. For pragmatic reasons,
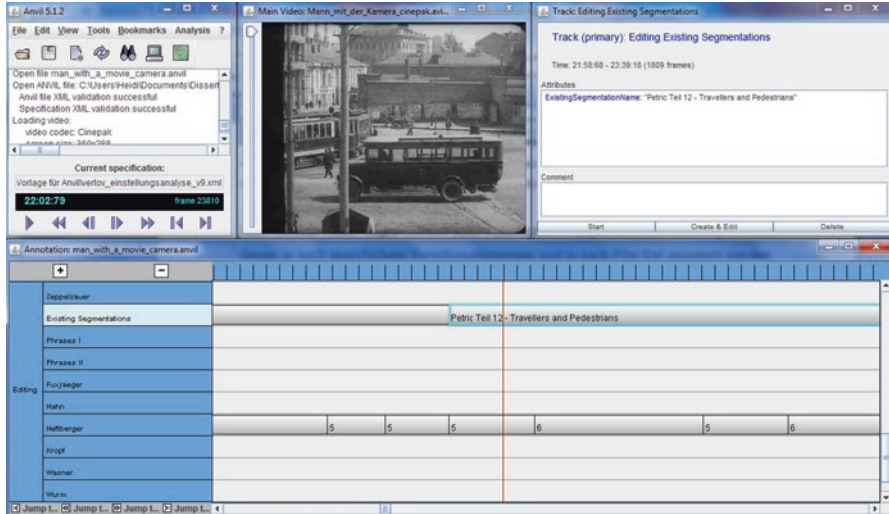
Fig. 3.9 Track 12, example: *Man with a Movie Camera*

it was decided not to use the entire range, which according to Werner Faulstich (2002) encompasses a total of eight categories: extreme close-up, close-up, close shot, medium shot, full shot, medium long shot, long shot and extreme long shot. Certain processes of time manipulation, such as time lapse and slow motion, are noted in the tenth annotation track. The precise subcategories here are freeze frame, slow motion, fast motion, reverse motion, reverse slow motion and reverse fast motion. In addition, different kinds of camera masks were entered in the 11th annotation track. Here, too, there were also subcategories: circular-shaped masks and other masks. Vertov made particular use of these masks in *Kino-Eye*, less frequently later on.

Alongside this relatively restrictive framework of film measurement there were yet further tracks for free annotation for each film and specific research interest. The 12th annotation track (Fig. 3.9) contained Vlada Petrić's sequencing of *Man with a Movie Camera* from his unpublished appendix. This will later be discussed further.

Results of the Annotation

In order to provide an overview of the annotation achieved in the Digital Formalism project, the data obtained in the main categories will first be summarised once for each film. Although the annotation template provides a comprehensive form for commenting on and measuring the films, certain compromises had to be made, as not all films could be described to the same level of detail.

Certain categories refer only to selected films, in addition to which the project's time resources were limited. In all cases the length and types of shots, the near duplicates, camera and object movements, as well as cue marks and beginnings and endings of reels, are annotated, listed according to frequency and statistically represented. In this simple table form, one can gain first impressions about the film, intended as an overview, which only in some cases are interpreted or contextualised. Subsequently, the shot lengths per film, according to their length in frames, are broken down, in order to give an impression of the distribution and to compare the distributions with each other. In this way, one can record the first indications of a possible development in the design of montage by Vertov and Elizaveta Svilova, his wife and close collaborator.

Shot Type

To facilitate the overview, all shot types are here summarised in the total number of appearances per film. The Digital Formalism project provided for formal processes such as dissolves and multiple exposures to be counted as single shots. The titles of the films are listed from left to right in chronological order and, for reasons of space, are mainly abbreviated. One further preliminary remark is the category black frames are very specific to the project, as it was very important for recognition by computer-aided analysis. In what follows there is no reference to black frames, as most cases are artefacts resulting from copying or scanning (e.g. leader film that has been digitised as well) and are not part of any processes intended by Vertov.

No.	Shot type	Kino-Eye	KP No.21	Stride, Soviet!	Sixth Part	Eleventh	MWMC	Enthusiasm	Three Songs
1	Standard shot	1070	291	854	671	558	1630	559	610
2	Intertitle	77	90	176	287	62	10	5	103
3	Animated intertitle	0	6	1	0	0	1	0	4
4	Animated cartoon	43	5	0	0	0	0	0	0
5	Object animation	0	0	4	3	0	25	0	3
6	Black frames	20	10	18	16	0	38	7	26
7	Multiple exposure	0	0	4	3	23	22	22	21
8	Multi-image/ split screen	0	2	2	6	12	37	2	0

No.	Shot type	Kino-Eye	KP No.21	Stride, Soviet!	Sixth Part	Eleventh	MWMC	Enthusiasm	Three Songs
9	Dissolve	48	2	38	14	5	13	6	26
10	Fade-in	1	1	5	2	0	2	1	10
11	Fade-out	2	2	7	3	0	2	1	8
12	Bar wipe	4	0	0	1	0	0	0	5
13	Iris in/from black	16	0	0	3	0	0	0	0
14	Iris out/to black	4	2	1	3	0	0	0	0
15	Iris in/not black	8	0	1	0	0	0	0	0
16	Iris out/not black	2	0	0	0	0	0	0	0
17	Complex transition	9	2	1	5	2	2	0	1
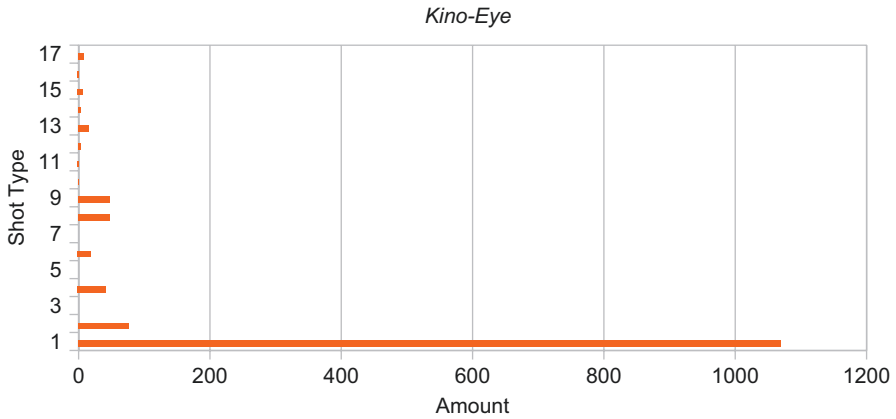
Fig. 3.10 *Kino-Eye*: distribution of shot type

In principle, the graphic representation of the shot types takes two forms: first all shot types are presented in their totals per film. Then, in a second graph, both of the most frequently used shot types (usually standard shot and intertitles) are removed, in order to permit the altered frame of reference to show the distribution of the less frequently used shot types with greater clarity (Figs. 3.10, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, and 3.25).
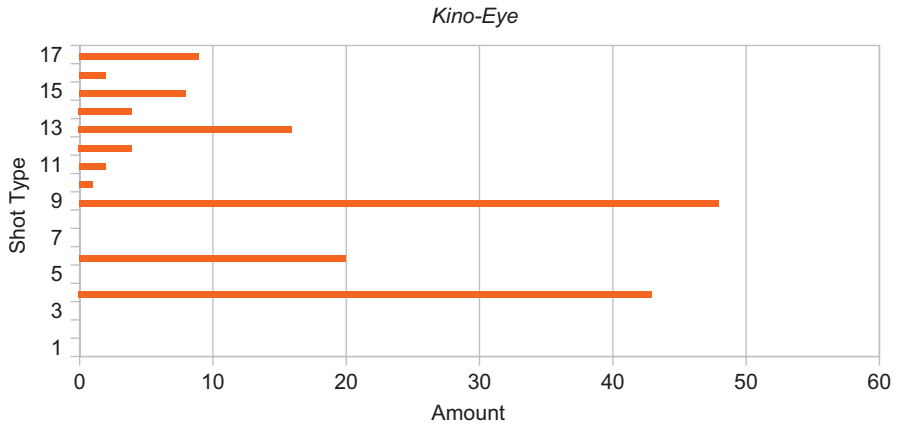
Fig. 3.11 *Kino-Eye*: distribution of shot type without standard shot and intertitle
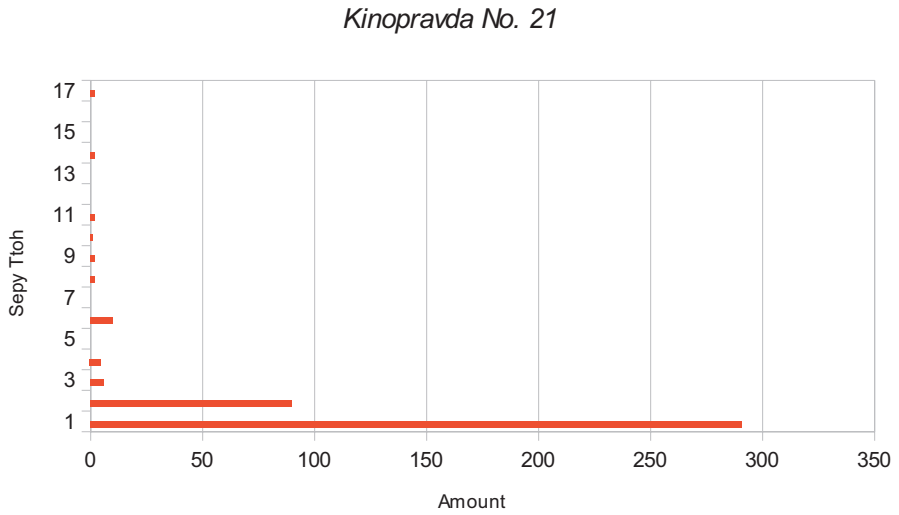
Fig. 3.12 *Kinopravda No. 21*: distribution of shot type
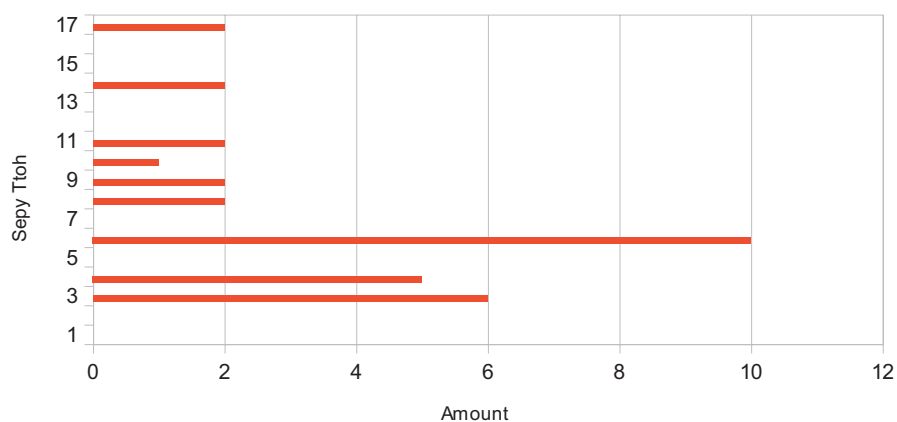
Fig. 3.13 *Kinopravda No. 21*: distribution of shot type without standard shot and intertitle
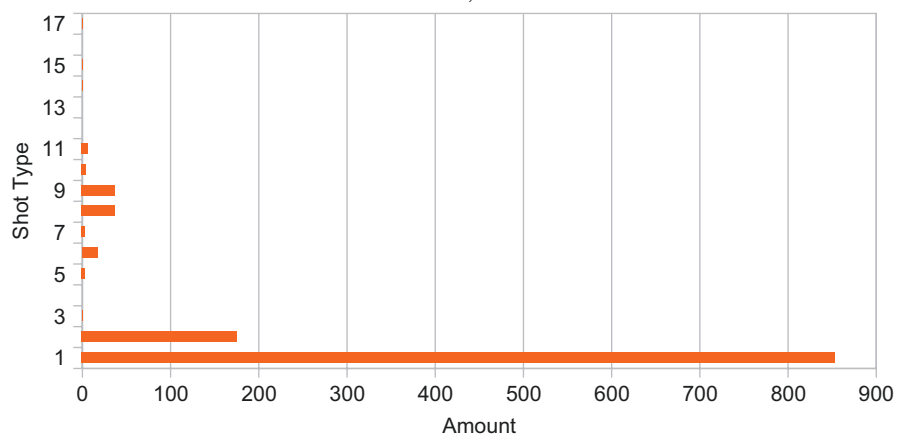
Fig. 3.14 *Stride, Soviet!*: distribution of shot type
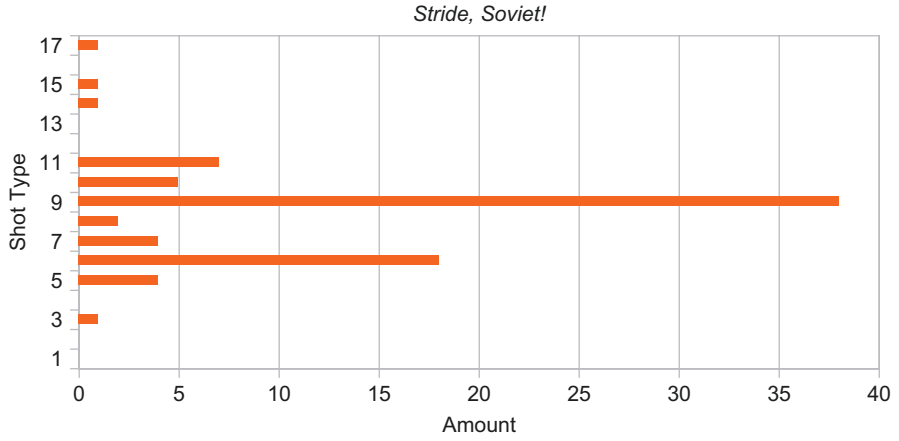
Fig. 3.15 *Stride, Soviet!*: distribution of shot type without standard shot and intertitle
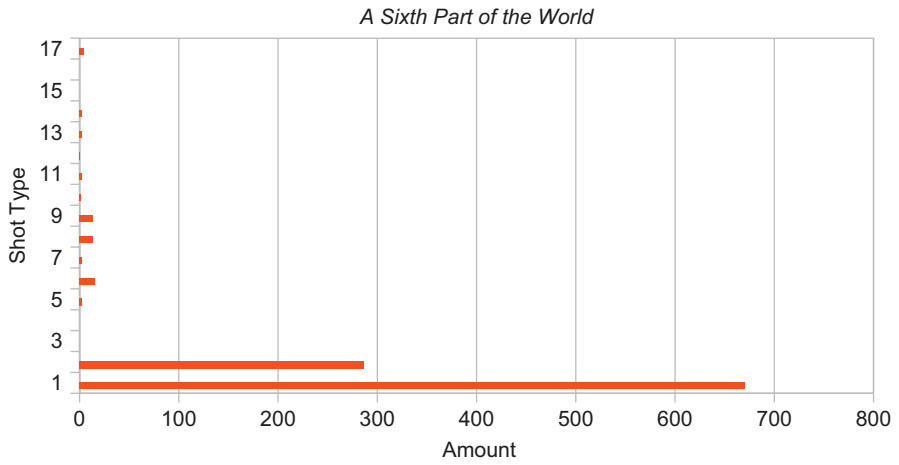
Fig. 3.16 *A Sixth Part of the World*: distribution of shot type

A Sixth Part of the World
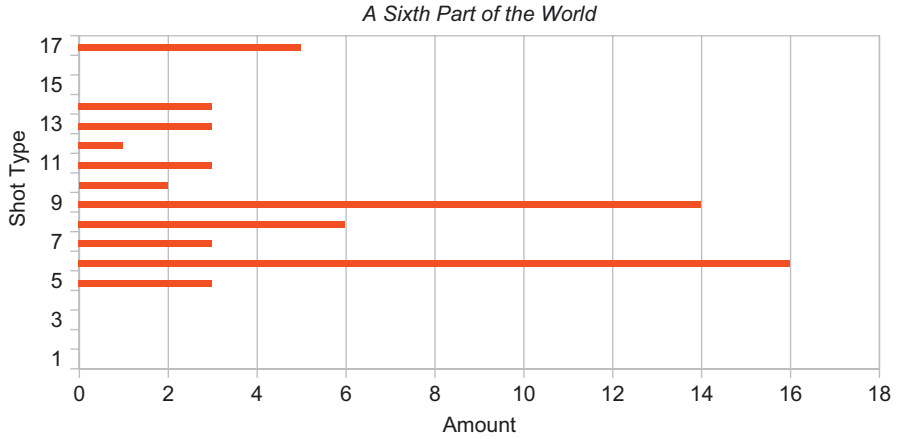
Fig. 3.17 *A Sixth Part of the World*: distribution of shot type without standard shot and intertitle
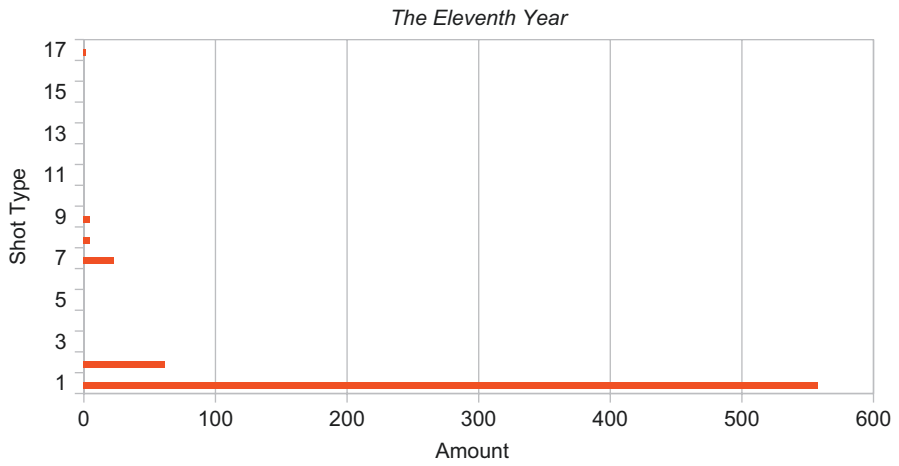
The Eleventh Year

Fig. 3.18 *The Eleventh Year*: distribution of shot type
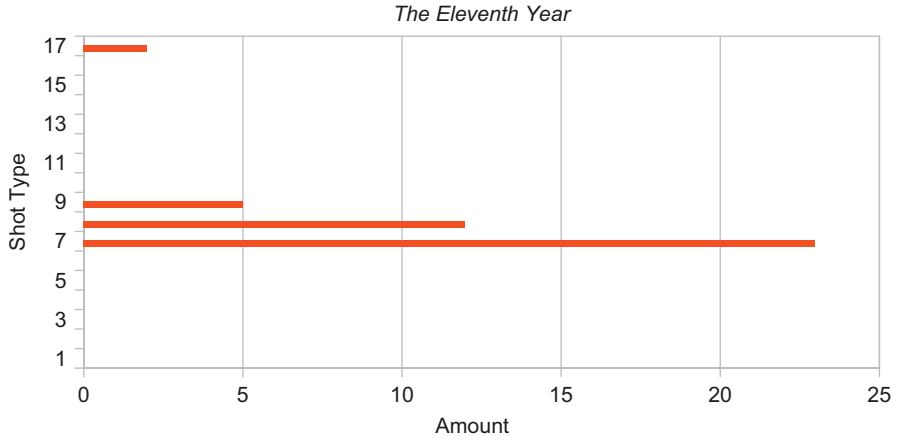
Fig. 3.19 *The Eleventh Year*: distribution of shot type without standard shot and intertitle
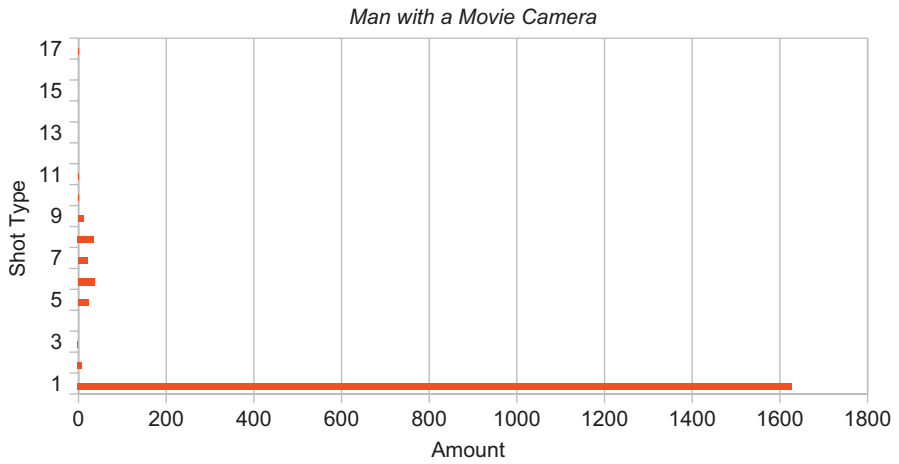
Fig. 3.20 *Man with a Movie Camera*: distribution of shot type
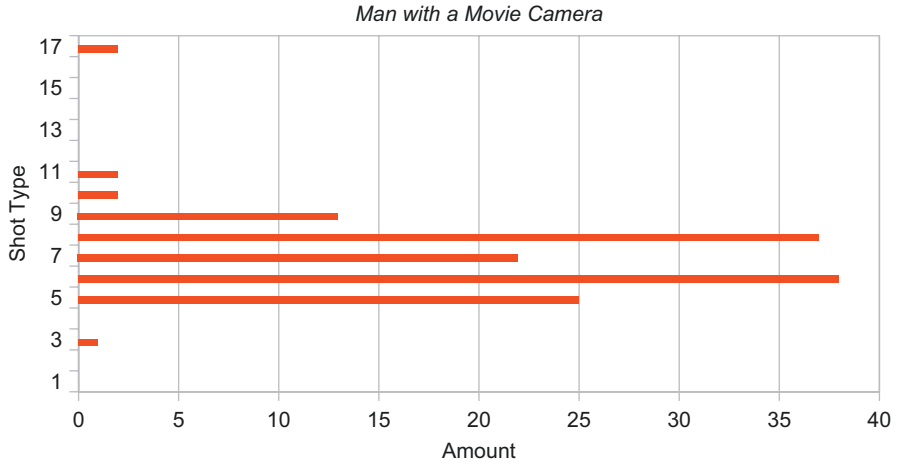
Fig. 3.21 *Man with a Movie Camera*: distribution of shot type without standard shot and intertitle
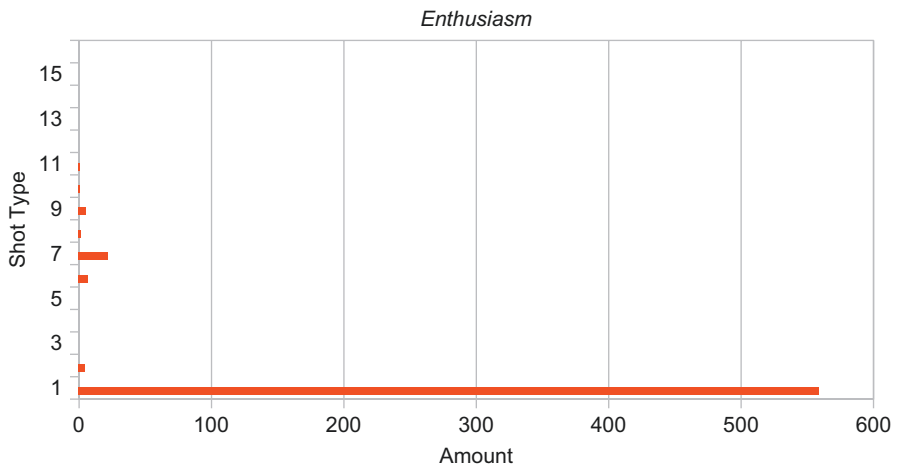
Fig. 3.22 *Enthusiasm*: distribution of shot type
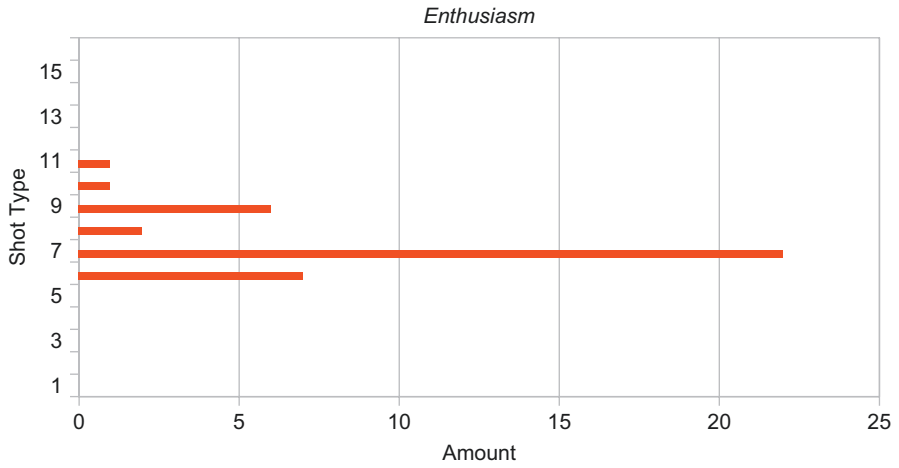
Fig. 3.23 *Enthusiasm*: distribution of shot type without standard shot and intertitle
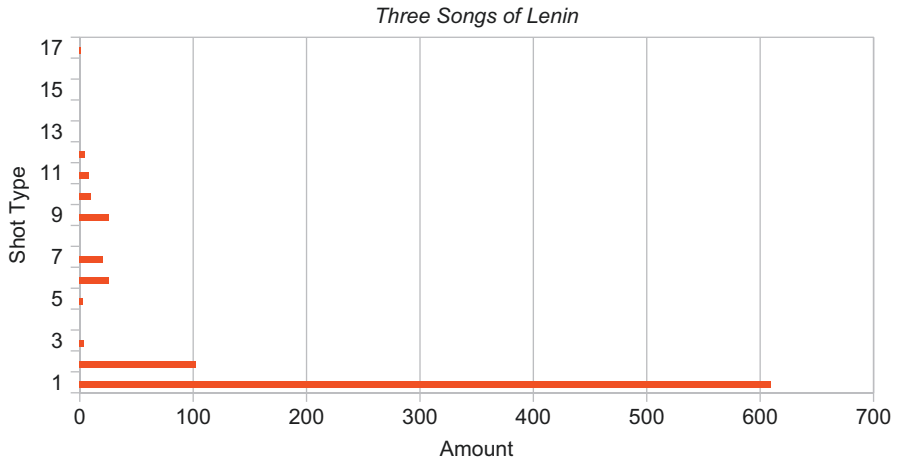
Fig. 3.24 *Three Songs of Lenin*: distribution of shot type
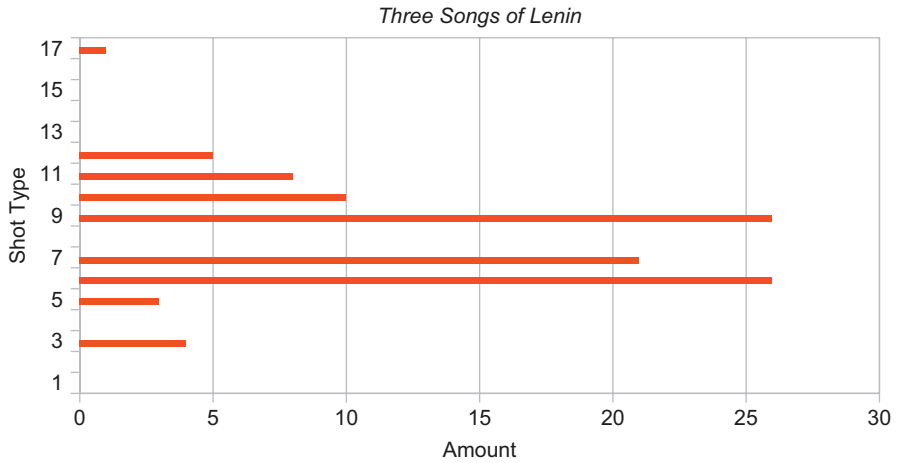
Fig. 3.25 *Three Songs of Lenin*: distribution of shot type without standard shot and intertitle

Camera Movement

In a similar fashion, the camera movements for all films up to *Enthusiasm* are collectively listed. Mentioned are all clearly recognisable camera movements within a shot from beginning to end. Thus, for example, more than one camera movement could be present within a single shot.

No.	Camera movement	Kino-Eye	KP No.21	Stride, Soviet!	Sixth part	Eleventh	MWMC	Three songs
1	Rotation right	110	39	63	52	30	109	102
2	Rotation left	113	26	46	54	26	68	105
3	Rotation up	51	9	40	21	27	71	47
4	Rotation down	47	0	28	29	17	72	40
5	Travelling right	14	4	2	7	15	48	6
6	Travelling left	19	1	1	7	14	68	2
7	Travelling up	0	0	0	0	0	1	0
8	Travelling down	0	1	0	0	0	2	0
9	Travelling forward	48	7	6	35	22	29	6
10	Travelling backwards	10	4	1	6	27	2	0
11	Unstable camera	6	1	6	6	0	21	11

In Figs. 3.26, 3.27, 3.28, 3.29, 3.30, 3.31, and 3.32, the camera movements of the individual films are graphically represented.
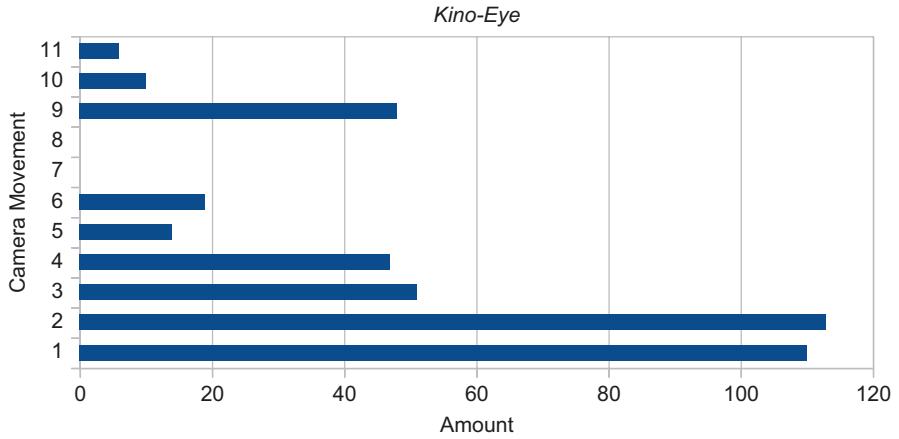
Fig. 3.26 *Kino-Eye*: camera movement distribution
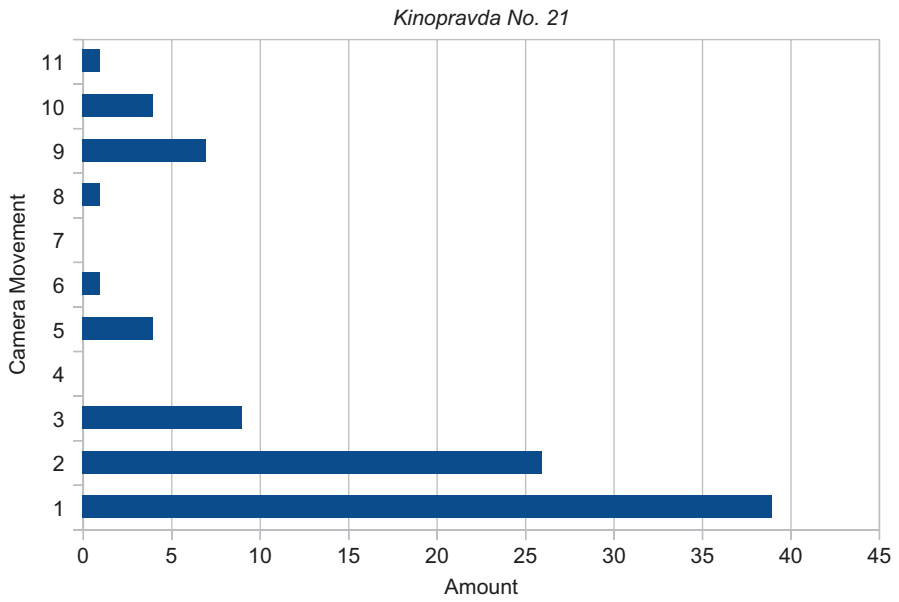
Fig. 3.27 *Kinopravda No. 21*: camera movement distribution
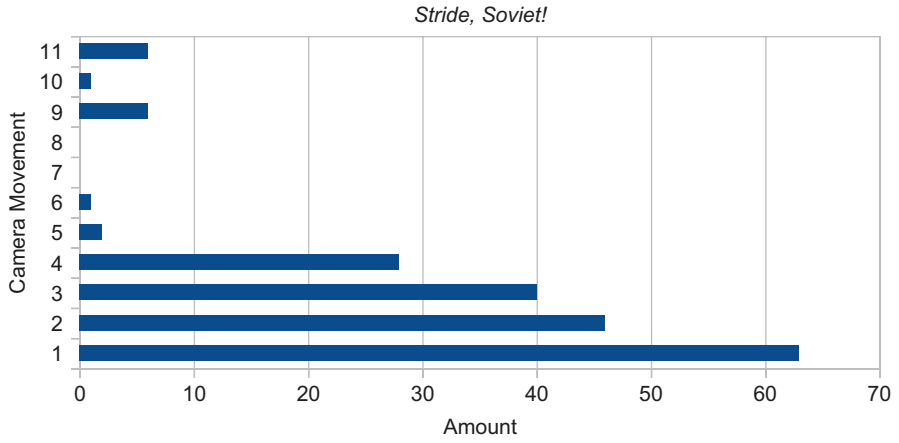
Fig. 3.28 *Stride, Soviet!*: camera movement distribution
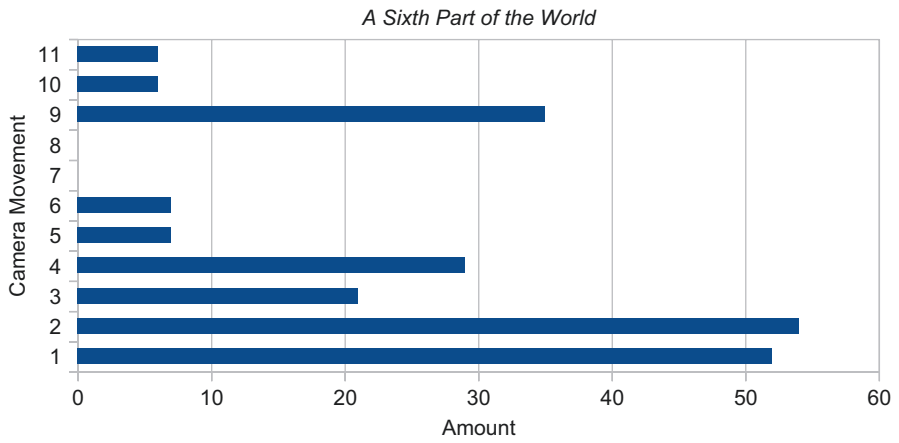
Fig. 3.29 *A Sixth Part of the World*: camera movement distribution
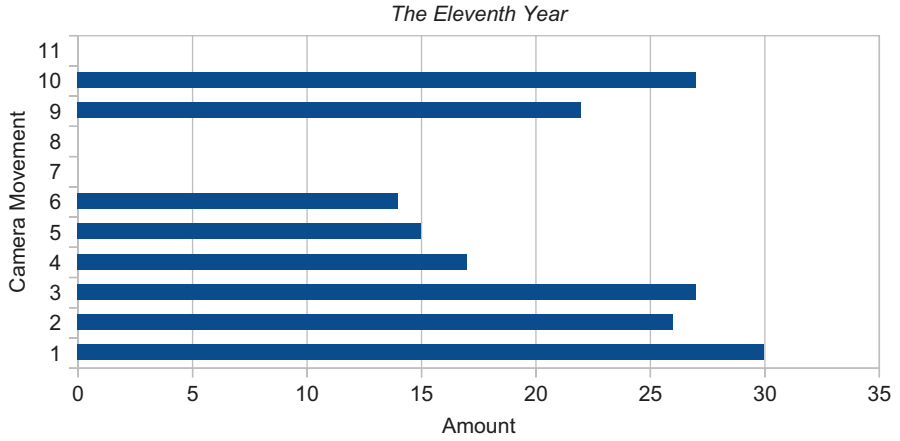
Fig. 3.30 *The Eleventh Year*: camera movement distribution
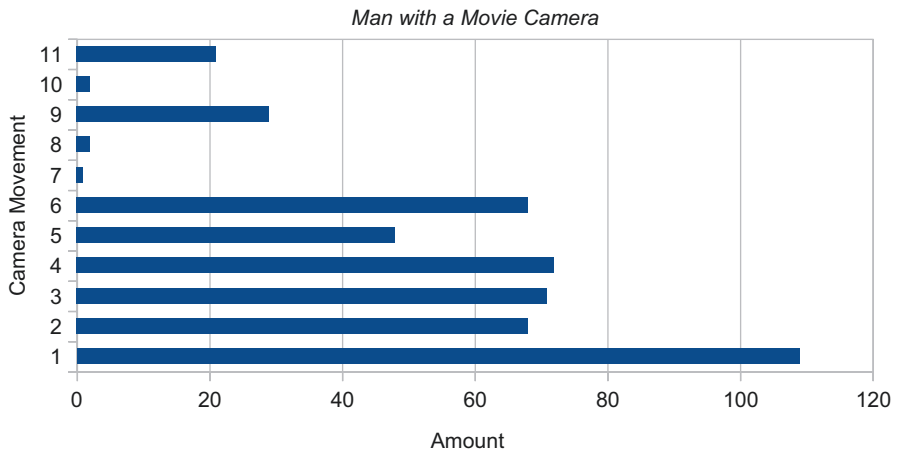
Fig. 3.31 *Man with a Movie Camera*: camera movement distribution
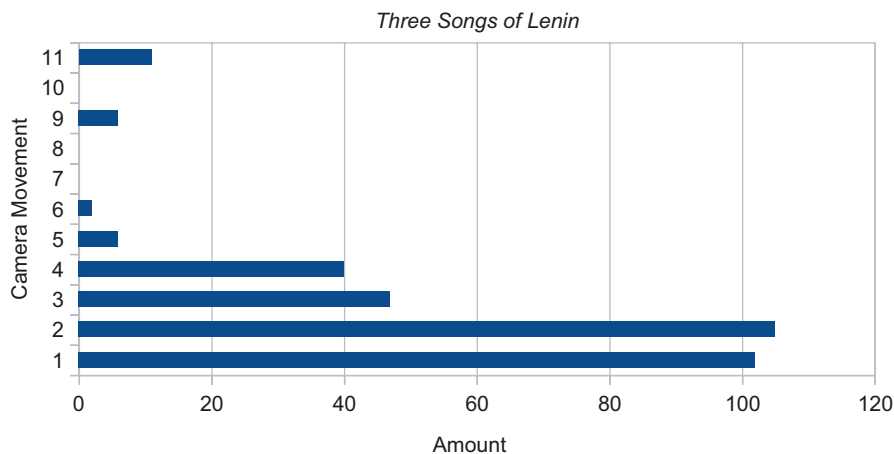
Fig. 3.32 *Three Songs of Lenin*: camera movement distribution

Statistical Evaluation

Film scholars are rarely trained in statistics. Perhaps this is the reason, firstly, why no systematic quantitative film analysis has evolved and, secondly, why the statistical research is often carried out by enthusiastic scholars who are, however, strangers to the discipline. It is typically the scientists who are fearless in dealing with this complex material, because statistics are simply a part of their profession. They are interested in testing familiar methods on film data as well; here one could name Herbert Birett (geophysics), Mike Baxter (archaeology), James Cutting (psychology) or Peter Grzybek (linguistics). This circumstance, however, leads to the consequence that such analyses and interpretations are neither widely known nor taken seriously within film scholarship. Perhaps this is also due to the questions raised, which, in part, remain superficial. On the other hand, the number of those from within film scholarship researching quantitative film analysis is growing. Alongside such pioneers as Barry Salt, one could also mention, among others, Nick Redfern or András Balint Kovács.

I would like to begin with Herbert Birett, whose work on statistical analysis of silent films has somewhat lapsed into obscurity. Film historians know Birett above all for his commendable publications on early German cinema, including the standard work *Verzeichnis in Deutschland gelaufener Filme. Entscheidungen der Filmzensur 1911–1920.* The identification of films from this period is extremely difficult due to so much information being missing (or rather, lost). One possibility is to fall back on the expertise of specialists in, for example, the identification of actors and so gain valuable clues.[2] Often there will, unfortunately, be no available

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[2] Cf., for example, the Library of Congress' Mostly Lost Film festival in Culpeper, which annually screens unidentified films. The public is called upon to help in providing clues, cf. https://www.loc.gov/item/prn-18-050/librarys-cinematic-treasure-hunt-for-mostly-lost-films/2018-05-11/. Last accessed 8 Aug 2018.

literature or insufficient references or cross-references, which is not surprising when one considers that an estimated 80% of all silent films are lost. A good first indication would thus be an approximate date of production, in order to narrow down the field of research.

Birett therefore suggests supplementary methods, which begin with a thorough examination of the film material, in order to get a lead, for example, from edge marks or logos:

> Very advantageous for dating is the fact that some film companies (especially: Gaumont) noted a production or distribution number, partly only on main titles and partly on every intertitle. This makes it possible, on the basis of a single intertitle, to determine which film it is and, according to its position relative to known films, to pinpoint the time of its making. (Birett 1988: 71)

This type of information was also assembled by Harold Brown (1990), the first head of preservation at the British Film Institute (BFI) and published under the title *Physical Characteristics of Early Film as Aids to Identification*. For archivists, works such as these constitute indispensable professional tools, especially in times that are seeing knowledge about analogue film production rapidly vanishing.

While inspection of the material is still a part of daily routine in film archives, Birett subsequently goes on to realms less familiar to film archivists. According to his observation, one can assign approximate time periods to certain film lengths; thus, for example, a film of 1000 metres length can with fair certainty be assigned a production date not earlier than 1909–1910 (Birett 1988: 71). As a sole means of identification, the length is, however, very unreliable. He therefore suggests combining several characteristics of style in order to arrive at a more precise estimate. Particular attention should be paid to the length of shots and to the intertitles, from which useful conclusions can be drawn (ibid.: 73). As a first step, the commonalities of different films must be determined, in order thus, in a manner of speaking, to define a "normal film," for "such generalisations, which are naturally linked to simplifications, provide the initial basis by which to recognise the peculiarities of a film" (ibid.). Similarly, one could then define a "normal film" of a particular director.

Birett's approach seems strikingly modern, which is due not only to the fact that statistical film analysis has not since become either established nor has it significantly developed; Barry Salt, referred to by Birett in 1988 as its most current practitioner, is still considered the yardstick. He is to be credited, above all, for his success in linking practical film studies (the identification of films) with cognitive film theory by means of stylistic analysis. If his theses are not implemented or proven through many examples, which is due to the specifications of the publication, there are nonetheless many stimulating thoughts to be found, precisely in the area of justifying the use of statistical analysis. As an example, Birett demonstrates that the distribution of shot lengths proceeds logarithmically, i.e. that there are more short than long shots and the graph is thus inclined to the left. This phenomenon will yet be vividly demonstrated in Vertov's films. Birett's explanation of it is as follows:

> That the distribution is logarithmic is no surprise to a psychologist or a physiologist, as many perceptions follow a feelings-intensity relationship that is logarithmic. In my opinion, this phenomenon has something to do with the human perception of time. For one arrives at very similar graphs for experiences with different rhythmic divisions: movements in sleep, eye movements etc., which support an assumption of time perception.(Ibid.: 80)

Birettt subsequently suggests how it might be possible productively to bring together further empirical investigations of subjective perceptions of time with quantitative measurement of shot lengths or how one could even control perception by giving audiences different information before screenings of the same film. He suspects one could thus obtain varying estimates of the editing rhythm. As he writes in conclusion: "There are no limits to further fantasy and the film that follows it."

Following this excursion into the history of statistical film analysis, one may still maintain that shot length may be the basis for investigating further formal categories. For Salt, shot length is above all relevant as median shot length, the length of all shots divided by the number of shots. In the literature, the term ASL (average shot length) has become standard. Alongside ASL, shot scale and camera movement have become for Salt the most important parameters for the statistical description of a film (Salt 1992a). As it is precisely the recording of all camera movements that requires a great investment of time, Salt counted in each case only the first 500 shots and reported pans, tilts, crane shots, dollies, zooms and combinations of these in their number.[3] Although he admits that a complete description would be better – "ideally, the analysis should be done by recording the complete characteristics of each shot (scale, movement, length, etc.) in succession down the length of the film" (Salt 1992b) – he has remained with his method out of economic considerations. Salt has been criticised by Bordwell and Thompson (1985) for his lack of scientific attitude or at least for his empiric imprecision, which seems justified in the light of his own polemic against the unscientific writing of film history. In his preoccupation with the statistical distribution of shot lengths, Salt goes a great deal further than this book can aim. It is still worthwhile understanding his considerations, which are based on decades of work with film data as well as an exhaustive film-technical knowledge. In his relatively recent contribution, "The Metrics in Cinemetrics," Salt (2011) even proclaims the advent of the new subdiscipline *experimental film studies*.

Statistical style analysis, as differentiated from the analysis of shot composition (mise en shot criticism), can be defined, according to the film scholar Warren Buckland, as follows: "Statistical style analysis characterizes style in a numerical, systematic manner – that is, it analyzes style by measuring and quantifying it. At its simplest, the process of measuring involves counting elements, or variables, that reflect a film's style, and then performing statistical tests on those variables" (Buckland 2002).

This method serves three aims, which Buckland formulates with regard to the new technologies and analogous to quantitative linguistics. To begin with, statistical style analysis serves for the extraction of quantitative data, which may undergo further

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[3] His database may be viewed at http://cinemetrics.lv/satltdb.php. Last accessed 9 Aug 2018.

computer-aided processing. The additional aims, similar to what was suggested by Birett, refer to the attribution of authorship and the identification of the chronological framework of production, for example, the order of individual works in the chronology of their creation. Questions of the evolution of stylistic characteristics and formal processes in general are here of relevance. Fascinating studies, such as that of Kovács (2014) on shot-scale distribution, also deal with the question of whether these processes could also be validly seen as *auteur* characteristics.

Distribution of Shot Lengths

In the following chapter fundamental statistical evaluations will be drawn up, based on the data from the annotation or, more precisely, on the absolute lengths of the shots and not on average shot lengths per film. Initially the distribution frequency is calculated, followed by the absolute sums of the frequency and finally the relative frequency totals. The results will also be presented in graph form. In this presentation it will be clearly visible that Vertov followed a similar distribution pattern in the creation of shot lengths in all his films between 1924 and 1934: short shots (up to about 200 frames) are most frequent, especially shot lengths up to 50 frames long.

Manually annotated shot-length data for eight of Vertov's films are available from the Digital Formalism project. With the exception of the annotations for *Kinopravda No. 21* (1925, Dziga Vertov) and *Kino-Eye*, all data were created by the author. Subsequently, the data was checked once more in a further step together with computer scientists. In this so-called original list, the values have not yet been arranged, and one is dealing with ordinal data, i.e. they can be placed in a certain order (e.g. ascending or descending). For all films it is possible to begin with a calculation of the average and the median length of shots in frames, in order to obtain a comparison of the shot lengths of all films, as the following table shows. A statement in frames rather than in seconds is sensible, as one is then independent of the speed at which the film is being shown. It is thus better for comparison with other films. For a calculation of the values in seconds, one can then, for example, use the online film length calculator.[4]

The shot lengths per film are divided into self-chosen classes, in order to provide a better overview in presentation. A class width of 50 frames also permits a meaningful presentation of long shots, while for the many short shots, it is not yet adequate to record and display their information content. In order, therefore, to better break down the area of the shorter shots, a second grouping in smaller classes (class width 20 frames) was undertaken. The distribution of the shot lengths for the class width of 50 frames appears in a diagram form as shown in Figs. 3.33, 3.34, 3.35, 3.36, 3.37, 3.38, 3.39, and 3.40.

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[4] http://www.cinematography.de/filmruntime_calc.php. Last accessed 8 Aug 2018.

Film	Number of frames	Number of shots	Median (frames)	Average (frames)
Kino-Eye	84.003	1.304	46	65
Kinopravda No. 21	35.059	413	56	85
Stride, Sovet!	78.271	1.108	57	71
A Sixth Part of the World	79.785	1.017	53	78
The Eleventh Year	63.122	660	68	96
Man with a Movie Camera	95.767	1.782	36	54
Enthusiasm	97.114	604	103	161
Three Songs of Lenin	89.022	817	82	109
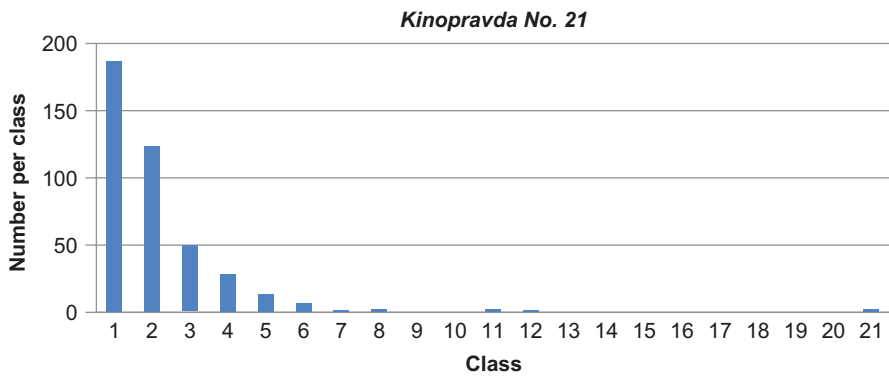
Fig. 3.33 *Kinopravda No. 21*: frequency of shot length distribution
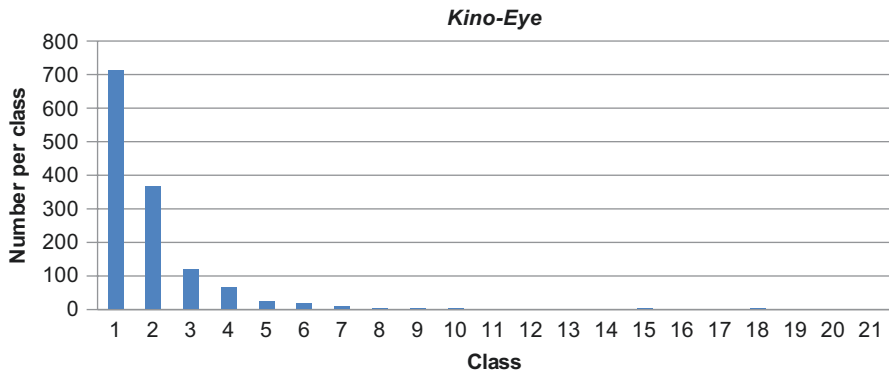
Fig. 3.34 *Kino-Eye*: frequency of shot length distribution

Fig. 3.35 *Stride, Soviet!*: frequency of shot length distribution
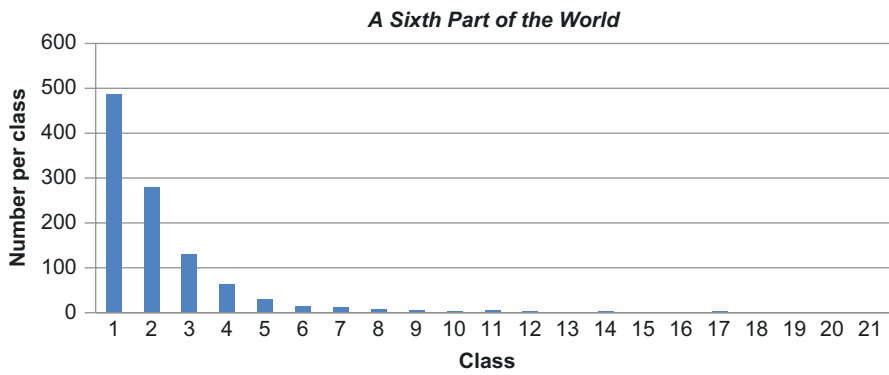
Fig. 3.36 *A Sixth Part of the World*: frequency of shot length distribution
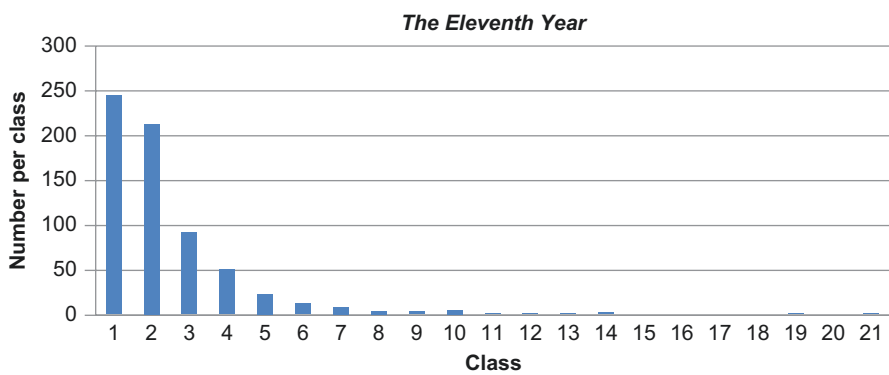
Fig. 3.37 *The Eleventh Year*: frequency of shot length distribution
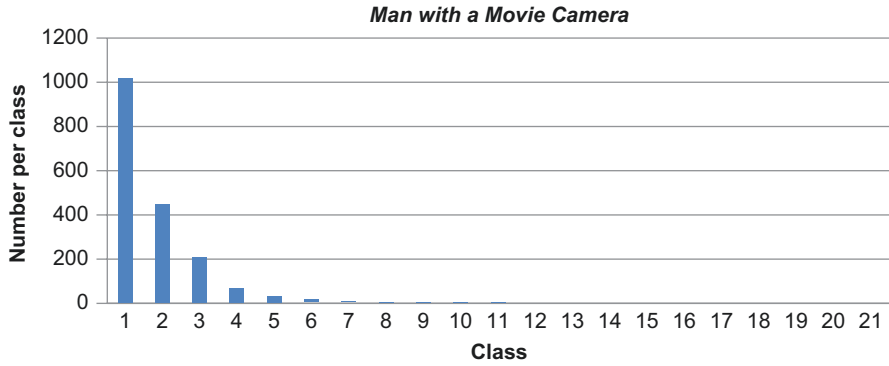
Fig. 3.38 *Man with a Movie Camera*: frequency of shot length distribution
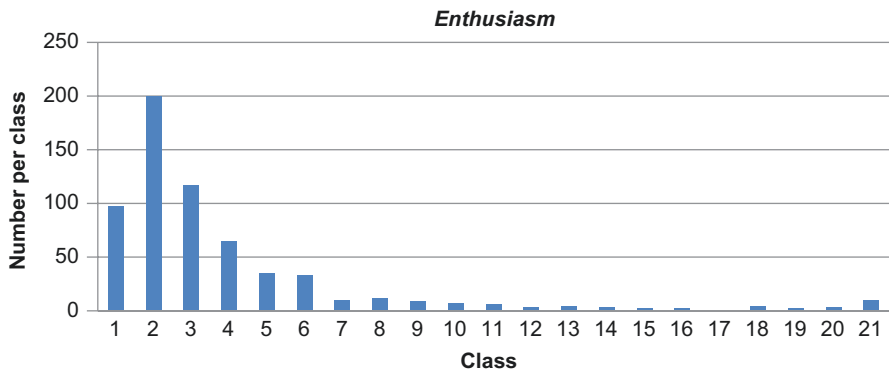
Fig. 3.39 *Enthusiasm*: frequency of shot length distribution
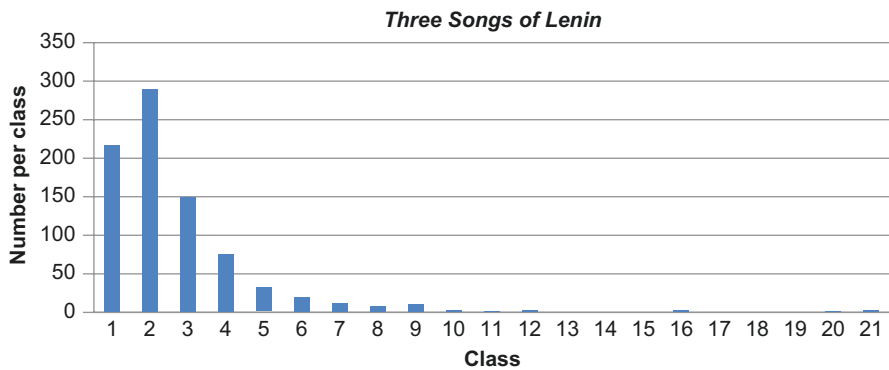
Fig. 3.40 *Three Songs of Lenin*: frequency of shot length distribution

The distribution can finally also be shown in an overall diagram. In it, the distribution of the different classes of width, of 50 frames (Fig. 3.41) and 20 frames (Fig. 3.42), is separately broken down in a graph.

For a visual assessment of the differentiated contrasts between frequency of distribution, the representation as (cumulative) frequency sum distribution is still more
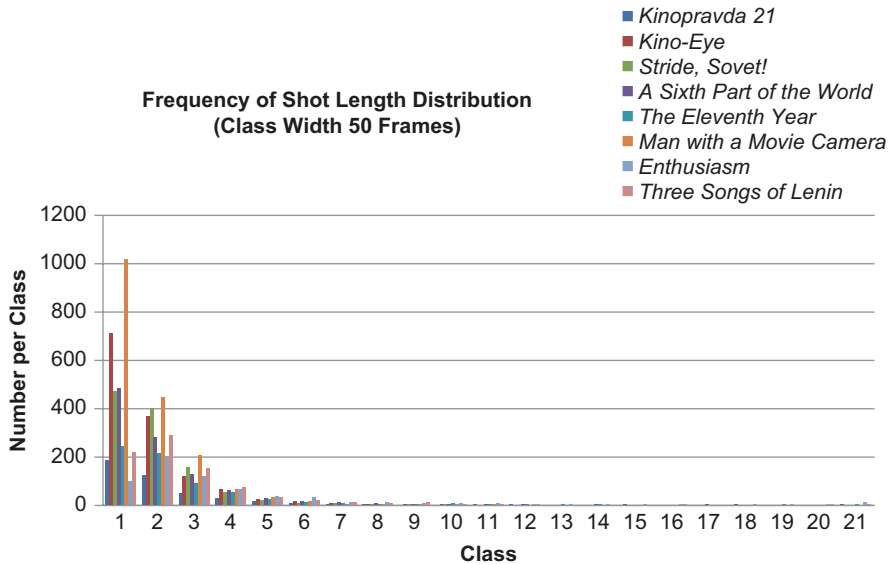
Fig. 3.41 Frequency of shot length distribution in total. Class width: 50 frames
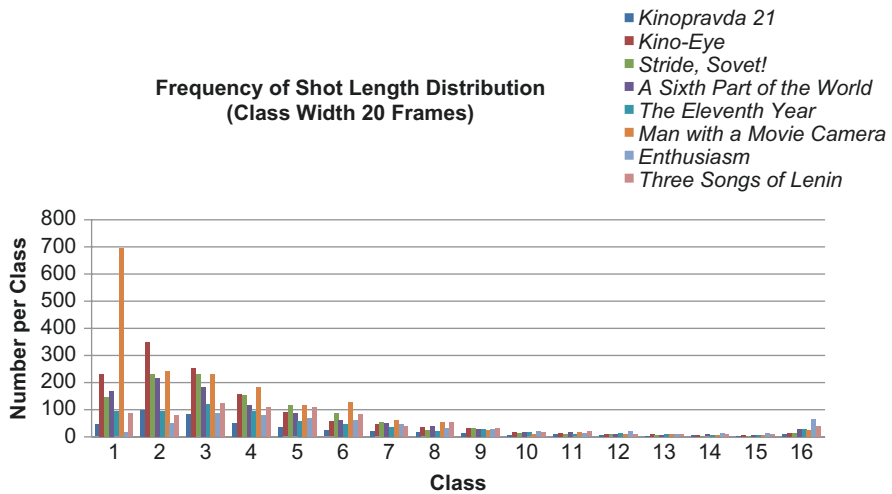
Fig. 3.42 frequency of shot length distribution in total. Class width: 20 frames

suitable (Lorenz, Vollmar 1996: 31). As an example for the calculation, I have used the values of the 50-frame class width. First, step by step, the absolute frequencies are formed by the adding up of the absolute frequency totals. After dividing by the total sum of all views, i.e. all shots, the relative frequency totals for each class are arrived at. The related cumulative curves of the relative frequency totals for all calculated films appear as an overall representation in Fig. 3.43.

By calculation and representation of the frequency totals and the cumulative curve, one can begin to make statements about the distribution of shot lengths in the individual films, but it is also possible to make comparisons between the films. For example, in *Kinopravda No. 21*, 45% of all shots are shorter than 50 frames, and 98% are shorter than 300 frames. In *Man with a Movie Camera*, the proportion of shots that are shorter than 50 frames is the highest of any film viewed within the body of work (57%). But other Vertov films also display a similar pattern. The only exceptions are *Enthusiasm* and *Three Songs of Lenin* (1934, Dziga Vertov). In *Enthusiasm*, the proportion of very short shots is at the lowest, with only about 16% of all shots, and also overall the cumulative curve is flatter, as can be read in Fig. 3.43. The explanation for this phenomenon will be clarified through the visualisations.

Further Studies

The statistical investigations I carried out with my data are relatively simple. In dealing, however, with the choices and decisions involved in more demanding and potentially more significant models, there are currently fascinating methodological
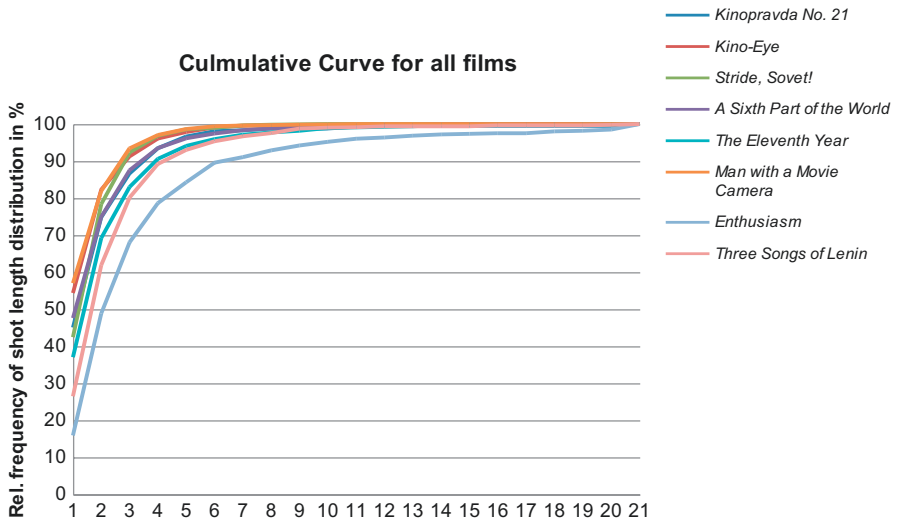
Fig. 3.43 Eight Vertov films as a total cumulative curve

discussions in progress. The exchange of ideas, which is taking place, for example, around Cinemetrics, basically revolves around the question of which statistical distribution model for film data, in the concrete sense of frequency distribution of shot lengths, could be utilised. The online Cinemetrics project founded by Yuri Tsivian is without a doubt one of the most renowned and lively of the available Internet platforms for film analysis and is constantly being expanded, where measurements of films can be easily contributed and uploaded for everyone to explore.

It is fundamentally true that the lengths of shots in a film are not distributed in a normal way. This can be seen clearly in the example of the Vertov data (such as in Fig. 3.41). It is conventional for a film to be constituted of more short than long shots; the graph tends therefore to the left and is not shaped like the familiar Gaussian bell curve. The normal distribution, also known as Gaussian distribution, is thus not applicable to film data, in order to provide statements about the expected probabilities of values. So far matters are agreed. It becomes more difficult to find a consensus regarding which model could be suitable. For Nick Redfern, one of the protagonists in the discussion and a harsh critic of the statistical calculations used up to now, the median is already the shot length, and the standard deviation related to it is no longer permissible (Redfern 2012). When one considers that both these parameters belong to the core data of Cinemetrics and are regularly used by many film scholars, it is actually a revolutionary claim. I would like to single out only a few criticisms which are relevant for the general statistical evaluation. As the author convincingly argues, the scope of Salt's sample is too meagre to be of significance. Bordwell and Thompson have expressed similar thoughts, as I have mentioned elsewhere. Additionally, his choice is unsystematic, as Redfern demonstrates on the strength of Salt's book *Moving into Pictures*:

> In Salt (2006) the sample used contains a total of just 18 films, and one of these uses data from only the first 40 minutes of the film. Of the films in the sample two are silent films (1 from 1916 and 1 from 1924), 8 were released in the 1930s, four from the 1960s, and one each from the 1940s, 1950s, 1980s, and 1990s. Six of the films are French, one is German, one is Brazilian, and the remainder are American. This sample cannot be considered to represent any population of films sorted by historical era or by nation, and it is unclear on what basis the results are generalized to other films. (Ibid.)

Furthermore, Salt's methods of checking "goodness of fit" can – in the very best case – not be judged convincing. An additional, very widespread problem in film scholarship, according to Redfern, is that the statistical data in publications are not suitably presented and are often merely visually compared (ibid.). In summary, his verdict is withering: "There are, then, serious methodological issues regarding Salt's conclusions, which are based on a small, unrepresentative sample and flawed techniques for determining goodness-of-fit" (ibid.).

But Redfern's vehement criticism is actually directed against another tool, till now widespread in statistical film analysis and prominently and routinely used by pioneers such as Barry Salt and James Cutting: logarithmic normal distribution (abbreviated as log-normal distribution) (DeLong, Brunick, and Cutting 2012). Redfern dismantles the analysis of 150 Hollywood films by Jordan E. Long, Kaitlin Brunick and James Cutting in the context of the article "Film through the Human

Visual System: Finding Patterns and Limits." The author uses the same data set (after data correction, 134 films of the original 150) to check whether log-normal distribution – the model with which the authors worked – can be considered valid. Once more, the result at which he arrives is not positive: "The results show that, while a small number of films are well modelled by a lognormal distribution, this is not the case for the overwhelming majority of films tested (125 out of 134)" (Ibid.). It is, in fact, not even possible to determine the reasons why some films are more suitable than others. His final recommendation is therefore that for film style analysis, log-normal distribution cannot be used as a suitable model for statistical investigations and others must be found (ibid.).

As my next example shows, while simultaneously also presenting an interesting methodological approach, quantitative linguistics are also currently concerned with films. Peter Grzybek and Veronika Koch conclude their investigation involving *By the Law* (Lev Kulešov, 1926) with the clear verdict that log-normal distribution is not a suitable solution for the frequency distribution of shot lengths. Their analysis is, admittedly, limited to a single film, but it has been carried out with comprehensive theoretical contextualisation. The relevant shot lengths were taken from the Cinemetrics database and a discrete model chosen for the modelling, the so-called Zipf-Alekseev distribution (Grzybek, Koch 2012: 181). The statistical details need not be given here in full form, for my work is above all concerned with the potential connectivity to further and more broadly based investigations of Russian silent film.

To date, explain Grzybek and Koch, there has been no fundamental theoretical discussion, for "attempts to explain why a certain function or distribution might be typical for shot length distributions have been more or less ad hoc type" (ibid.: 178). It has mainly been assumed that this is not a chaotic process but that frequency distribution follows certain laws (see Birett, Salt and Redfern) and the scholars therefore chose either discrete models (such as Poisson distribution) or, more frequently, continuous models (simply log-normal distribution). Among other things, both authors pose the question of the proportion of conscious construction of the film length versus other regularities which influence the process, for "the thought has not occurred yet that shot length might be governed by the same or similar fundamental laws or regularities which explain a multitude of phenomena in the cultural world" (ibid.: 179).

What is particularly convincing in this investigation is the presentation of the statistical case study against a linguistics and film studies background. Lev Kulešov, also known as the father of Russian cinema, is quoted from his textbooks, in order to show what rules for the creation of shot lengths were then being taught at film academies. Three factors were to be taken into consideration in film work, the director instructed his students: the theme of the film or of the scene, the simple receptivity of the viewer and finally the rhythm. Besides this there was quite concrete practical guidance, for example, that a stationary object should be shown for at least half a second and that the shot lengths should in general be planned as accurately as possible before shooting (ibid.: 177). According to his experience, a director tended to underestimate the lengths; therefore as a rule of thumb, one should always add one-fifth of the assumed time. The optimal way for a viewer to see the film would fundamentally be in a suitable rhythm. It is no surprise for Grzybek and Koch that

shot lengths should be the result of painstaking planning, as even in the most advanced avant-garde film, successful communication, i.e. an understanding of the work, is at some level in the foreground (ibid).

The authors are suggesting no less than a new approach to statistical film analysis, one with a point of departure that is neither formal structure nor structuralist assumptions. The failure of appropriate approaches can be explained precisely by "the search for analogous (or isologous) units and relations between them, focused in the context of structuralist concepts, along with an absence of orientation towards the underlying processes" (ibid. 169). Rather, shot length should be investigated in the framework of a synergetic theory of language and communication. Grzybek and Koch therefore proceed, contrary to the dominant view, less from a conscious principle of construction on the part of the film-maker and place the dependence on opposing economic interests – of the producer and the consumer – more in the foreground, resulting "in a process of dynamic balance of the sign system involved" (ibid.: 184). The Zipf-Alekseev distribution or the "Zipfian forces of unification and diversification"[5] are, according to Grzybek and Koch, suitable for the theoretical modelling of their example, as, put in simpler terms, they can be derived from psychophysical models which describe the relationship between a physical stimulus and a human reaction (Grzybek, Koch 2012: 182).

They conclude that there are indications that the distribution of shot lengths are contingent on a specific mechanism which could also exist in all kinds of other semiotic systems (ibid.: 185). The idea that superordinate design principles could influence an artistic act, regardless of the kind of art, may also be found in Eisenstein. He writes, with a view to the actor, that there are no contradictions between his work and that of the poet, for:

> all these methods underlie the same human animating traits and conditions, which belong to each human and true-to-life art, just as they do to each person. These areas may apparently move on the most diametrically opposed of tracks. They always had to and must meet in their deep essential kinship of being and unity of method, as we now experience. (Eisenstein 1961: 280)

In my presentation of Redfern's argumentation and the case study of Grzybek and Koch, the complex methodological debate that is current could only be outlined to a certain extent. Unfortunately, more comprehensive studies, in which theoretical models, especially alternatives to log-normal distribution, are checked and examined, are (still) lacking.

From the way the discussions have proceeded, the impression is created that, firstly, film scholarship is still in its infancy concerning the adaptation of statistical models to film data. Secondly, there are grounds to suspect that there is, in principle, very little profound basic knowledge of statistics (or interest in that subject) available; the same may be assumed for mathematical skills within the humanities. The question of whether or not statistics should be taken up as part of the film studies

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[5] For further information cf. E. Khmaladze: Zipf law. In: Encyclopedia of Mathematics. URL: http://www.encyclopediaofmath.org/index.php?title=Zipf_law&oldid=12733. Last accessed 23 Apr 2015.

curriculum (as Redfern recommends) cannot at this point be clearly answered. The debate, which I have here unfurled in simplified form, requires a high degree of professional knowledge, optimally specialisation, in order really to understand the arguments of the participants. One possible constructive way out could be interdisciplinary collaboration.

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Chapter 4
Dziga Vertov's Films

The Theory of *Kinoglaz*

Before I introduce the individual films and their historical context, as well as their formal characteristics, I would like to provide an overview of Vertov's film theory, which, especially in the early years, he repeatedly promoted in manifestos and lectures. In part influenced by the constructivists and the futurists, Vertov rejected the aesthetic category of the composition of a work of art. The artist was no longer to be perceived as the creator, but as an engineer and constructor who must solve the technical problems of his artistic production in an active process. The accent is on the process-related serial nature of the procedure and on the rational control of the material's treatment. Vertov adopted the concept of factography ("literatura fakta"), developed by futurism and formalism, and attempted to apply it to the medium of film. Like other revolutionary film-makers, Eisenstein and Vertov wanted to escape the then-customary division of genres into melodrama, adventure film or slapstick and found various solutions to the problem. Eisenstein proclaimed his theory of the "montage of attractions" and moved from the films of agitation and attraction to a hybrid which linked moments of melodrama and documentary film together. By contrast, Vertov began from the newsreel genre, as it was at first the only one to achieve the presentation of actualities required by the factographs, and, using his form of editing, developed from it a kind of rhythmical poetic documentary film.

It was, furthermore, valid to make the filming and processing as transparent as the facts. Under the banner of this requirement, the factographic film presented the totality of filmic practice: the search for material, the people participating, the various work procedures and the general production conditions. Vertov's film theory, which Richard Barsam describes in his standard work *Nonfiction Film* as original, energetic and complex, can only be understood in the context of this basic idea of

factography and is therefore difficult to summarise. As the cultural scholar Boris Groys critically notes, the Achilles heel of the avant-garde aesthetic is its preference for contemporary media (Groys 1996: 35). Photographs, films or newspaper announcements that only fixed reality without processing it artistically were for the purveyors of both theory and practice a means of revelation (ibid.). They apparently could not or did not want to see through to the fact that these operations were no less ideological.

Vertov is known for having fought a vehement battle against the cinema in the form it had traditionally had in Russia, as it "clouds the eyes and brain with a sweet fog" (Vertov 1984c [1924]: 48). Very expressive and aggressive in his choice of words, he turned on the traditional feature film, which he labelled as theatrical and romanticistic. Without exception, he condemned all films that had been produced and shown in cinemas up to then both inside and outside Russia. His accusation was that conventional film drama was "sticking the arts inside one another", a mixture of theatre, literature, music and film. The depiction of real life was being covered up with staging, decoration and musical accompaniment. This blueprint of life, or, as Vertov wrote, its relationship, was always the same, regardless of whether it was a psychological, satirical, detective film or landscape film: a literary skeleton plus film illustration (Vertov 1984c [1924]: 12).

In opposition to this, he demanded the autonomous and pure film: "To see and hear life, to note its turns and turning points, to catch the crunch of the old bones of everyday existence beneath the press of the Revolution, to follow the growth of the young Soviet organism, to record and organize the individual characteristics of life's phenomena into a whole, an essence, a conclusion - this is our immediate objective" (Vertov 1984c [1924]: 47). Vertov attempted to make a film without props, sets, costumes or actors. He sought his leading performers in real life, for example, on the streets of the big cities and in the factories. He was equally interested in the machines and his euphoric call: "Saws dancing at a sawmill convey to us a joy more intimate and intelligible than that on human dance floors" reinforces his affinity to the Futuristic school of thought (Vertov 1984a [1922]: 7). The flawlessness and the mechanical rhythm of production procedures, the tempo and the uniform precision of work processes, fascinated him. His concluding call in the manifesto "WE. Variant on a Manifesto" summarises this fascination very graphically: "Hurrah for the poetry of machines, propelled and driving; the poetry of levers, wheels, and wings of steel; the iron cry of movements; the blinding grimaces of red-hot streams" (Ibid.: 9).

In order then to photograph the facts in an appropriate manner, Vertov developed his theory of *kinoglaz* (film eye). As opposed to the human eye, the film camera presented the film-maker with an objective and technically more accomplished possibility of recording the surrounding world: "We cannot improve the making of our eyes, but we can endlessly perfect the camera" (Vertov 1984c [1924]: 15). This juxtaposition of the human eye and the camera was naturally influenced by the affinity of futurism to mechanical objects and processes. In Vertov's reflections, he wished to free the camera and make it subordinate to the human organ of sight. In his concept, the camera is personified; it should and must, as in *Man with a Movie Camera*, crawl under trains, follow cars and people, stand in the middle of a street

junction and balance over the roofs of the city without getting dizzy, all the time constantly recording. The cameraman must be constantly on the move, and for this reason the *kinoki* built mobile cameras that were easy to transport. He did not, however, require a script or precise instructions; his only plan was to capture life directly and to be able to react quickly to changes.

The *kinoglaz* sees not only better but also more than the human eye; it can see to the bottom of things like a microscope, into their hidden structures – it exposes, as Vertov himself once more summarised in 1940:

> Kino-eye is to be understood as "that which the eye does not see", as a microscope and telescope of time, as guidance with the camera from the distance (as far-eye), as x-ray-eye, as "surprised life" etc. All the different definitions mutually complement each other, as by film-eye was understood: all filmic means, all filmic illustrations, all processes and methods, with which the truth allowed itself to be uncovered and shown. Not film-eye for the sake of film-eye, but the truth with the means and possibilities of the film-eye, thus the film truth. The "surprised life" photography not for the sake of the "surprised life" photography, but in order to show the people without make-up, in order to capture them with the camera eye in a moment without play, in order to read their thoughts exposed by the camera. Film-eye as the possibility of making the invisible visible, of clarifying the unclear, of uncovering the hidden, of exposing the masked, of making of play not-play. (Tode and Gramatke 2000: 91)

This idea of exposing an experience, with which the solidification or oversaturation of an established form can be exposed, originated with Viktor Šklovskij. Although their areas of activity were different, both wanted, as Wolfgang Beilenhoff (1973: 143) writes, to determine the process of exposure with the assistance of a technical category. The eye is directed to the essential facts via the camera and is thus the only thing that may come between reality and the viewers.

Vertov aspired to a renewal of both the form and the content of film and countered the "technically backward 6-act psychodrama" with his advanced experiments with montage and camera. The raw material for these was taken by the *kinoki* from life, as it is (žizn', kak ona est'), moreover: life would be filmed unrehearsed (žizn' vrasploch). The term is customarily translated as life taken by surprise. Jeremy Hicks, however, convincingly argues that by this Vertov did not mean primarily the hidden camera, but mainly wanted to reduce the posing and playacting of his protagonists (Hicks 2007: 23). The filmic practise of *kinoglaz* thus required special procedures and filming techniques. For this reason the *kinoki* formulated certain rules, according to which they could arrive at the life-surprising film records they desired. These appear very military:

> General instructions for all photography: the camera is invisible. Snapshot – old rule of war: visual judgement, speed, fire.

> Photography from a public observation post that has been prepared by Kinok-observers. Patience, absolute silence, at the suitable moment – immediate attack.

> Photography from a concealed observation post. Patience and absolute attention...

> Photography from a distance, photography of movement, photography from above. (Vertov 2003 [1924]: 53)

The question of practical execution is inherently problematic. How could the camera actually be made invisible and how could one obtain the speed and omnipresence of *kinoglaz*? In particular, the idea of taking life by surprise was, on the one hand, enthusiastically welcomed (by Aleksej Gan), and on the other hand, it was appraised very sceptically. Šklovskij, for example, derisively remarked: "Since, however, the non-actor does not know how to behave in front of the camera, a new problem arises: to teach everyone how to let oneself be filmed. A complicated method, to hammer the wall into the nail" (Šklovskij 2005 [1926]: 286). Indeed, Vertov scarcely resorted to this concept later in his films. He did, however, provide a few vivid answers in his film *Man with a Movie Camera*, where the camera really is constantly in motion and observes life in the city from all sides, as a hidden camera or quite visibly. In the latter case, the camera even participates in daily life in a formal sense and is simultaneously an observer and protagonist.

At this time Vertov reported of the shooting that it was necessary to play tricks to avoid immediately being surrounded by little boys, while the girls instantly adjusted their coiffure, and the men made faces like Douglas Fairbanks or Conrad Veidt (Tode and Gramatke 2000: 17). For Vertov, crowds of curious people were already unbearable just for their disturbance to the shooting; the friendly faces smiling artificially into the camera were even more annoying.

The actual process of making reality visible, the exposure of reality, took place with the organisation of the facts, the editing, whereas earlier a work of art was seen exclusively as the work of a creative artist. Vertov's colleague in direction and documentary film, Ėsfir' Šub, like him an opponent of the feature film, described the function of factographic montage as:

> An attitude to facts, not just reflecting them per se, but fundamentally illuminated, memorable, inducing further thought, space and environment, showing the people in this environment with utter clarity and this material compiled so meaningfully, associatively and universalised that the relationship of the author to the given facts is also made clear. (Schub 1967a [1929]: 135)

Seven years later Šub would, in self-accusatory manner, distance herself vehemently from factographic films and denounce the orientation towards facts as a central error of the documentary film: "We saw the fact as material for the montage and partly – this must be said honestly – as material with which to speculate with the montage. Urbanism, formalism, schematism, absence of subject, absence of object – all that had its place in the sequence of our films" (Schub 1967b [1936]: 139).

Vertov advocated for the construction of a film on the basis of intervals, that is, from the movement and the jump between the individual shots, a term first introduced in 1922. Oksana Bulgakowa explains how central this idea was for Vertov's filmic work, for it was thus that "the plot became a kinetic solution; the film then develops itself in transitions from one visual impact to the next" and the interval is "the result of various moments, in which repetition repeatedly plays a decisive role" (Bulgakowa 2000: 115). At this point one may consider Wolfgang Beilenhoff's reflections on the actual difference between the opponents Eisenstein and Vertov. In

1923, Eisenstein and the writer Sergej Tret'jakov developed the performance concept "the montage of attractions", which was not just an artistic procedure, but a method of influencing the spectator with the strongest possible filmic stimuli. Through the stringing together of shock elements, viewers should be led to the desired conclusions. Eisenstein aimed at the conflict which results when two shots collide with one another. The meaning of editing, for him, as he himself formulated it, was in staging such conflicts and their solution in the form of an explosion.

Vertov, by contrast, was not aiming for a conflict; for him the facts were, on the one hand, documents of extra-filmic reality, while on the other they were inextricably linked to the context that the film-maker had created for them in the syntactic organisation. It was not, in Vertov's view, sufficient to record the individual pieces on film; the truth should manifest itself in the whole. The extra-filmic reality should not only be documented or illustrated as precisely as possible, but first comes into being through the editing. The editing was thus created anew, and the actual interpretation came from real life via the newly assembled film sequences (the original facts). In *Man with a Movie Camera*, Vertov even wanted to compensate for the missing intertitles (which he consciously eschewed) with the aid of editing technique and thus to create a new film language (kinopis). In his later films, Vertov did, however, revert to intertitles or linked his film images with a soundtrack.

Vertov's own methods, including contrasting, paralleling, amplification, typisation and the rhetorical device of the hysteron proteron, did lead to criticism that he was working with the techniques of a rhetorician (Tsivian 2000). Which is certainly true, as the poetical methods he borrowed from verse and song are already clear in the titles of his later films: *Lullaby* (1937, Dziga Vertov) or *Three Songs of Lenin*. The film scholar Graham Roberts deals with the rhetorical figure of repetition and sees it as an attempt by Vertov to create his own language:

> Repetition of images is a key to cinema language, in films and between films (as well as through a genre and in auteur theory). Vertov understood this and utilized the method intelligently and consistently to make political points by building the depth of his signification in the repetition of imaginary to build on already existing iconography. It is not too fanciful to suggest that his repetitions are an attempt to write and disseminate his own iconography. (Roberts 2000: 45)

Beyond that, Vertov occupied himself with the question of how one could dissolve the boundaries between the viewers and the film. They should not, in his opinion, see themselves purely as consumers; rather, ideally, they should feel themselves to be a part of the reality shown on the screen. For Vertov, the film itself had to be a component of society and not reflect upon it from some distant vantage point. The cinema should become a venue of exchange; a worker, for example, should find himself again on the screen and thus be able to observe himself from the outside. The world of the cinema, so mysterious for the population of the time, had to be demystified. That should take place by means of the film-makers (the cameraman and the cutter, even the director) being filmed at their work and an emphasis being placed on its craftsmanship and industrial production. No longer should film be something staged and acted, but a part of real life.

Vertov's views on a general theory of art or of film are not systematically collected within a single work; rather, they are dispersed in manifestos, articles and lectures. During his lifetime, Vertov resisted developing any kind of "montage formula"; in his opinion, it could even be damaging to publish such a thing: "For if such methods are indiscriminately applied, the result will be nonsense. It's not hard to offer a formula. It's hard to specify when and where it should be applied" (Vertov 1984g [1929a]: 100). Vertov mentioned attempts till then to systematise editing, which had been written down in table form as various kinds of "counting results". It cannot be ascertained from the text whether he was referring to attempts of his own. In any case, Vertov did, in certain cases, wish to illustrate formulas. Alexandra Gramatke additionally points to a diary entry of Vertov's, perhaps best understood ironically, from 7 August 1939, in which he writes: "If there were a book entitled Vertov's System or Vertov's Work, then, after a change of managements, it would be possible to quickly acquaint the new management with myself; the manager would know how to make the best use of me" (Vertov 1984k [1939]: 221). In this connection, Jay Leyda may not be wrong when he complains (with a wink), in a 1972 interview, that Vertov's writings are too "mechanical": "Well, we would do more justice to both of them if we saw more of Vertov's films and read more of Eisenstein's writings".[1]

Vertov's texts on the theory of *kinoglaz*, however, also contain, alongside the polemic demarcation from the conventional (pre-revolutionary national and international) cinema, concrete procedural advice to directors, cameramen and editors. These mainly short passages, in which clear filming and editing tasks can be read, are to be found mainly in the early texts, written between 1922 and 1924. Vertov, however, strove until his death to employ and record practical considerations for a new organisation of film production and to illustrate them with diagrams.

Vertov's Phrase Model

In 1922, in the first edition of the periodical *Kino-fot*, the manifesto "WE. Variant on a Manifesto" was published, including a diagram that actually serves as the only model for Vertov's theory of montage (Fig. 4.1). It can graphically inform us about the director's interval terminology.

Vertov supplemented this graphic, which bears the heading "work" (proizvedenie), with the following sentences: "The organization of movement is the organization of its elements, or its intervals, into phrases. In each phrase there is a rise, a high point, and a falling off (expressed in varying degrees) of movement. A composition is made of phrases, just as a phrase is made of intervals of movement" (Vertov 1984a [1922]: 9). The work is accordingly composed of phrases (frazy) that indicate a main peak. In his writings, Jurij Tynjanov also talked about culmination points, which interrupt and emphasise longer sequences of shots. In the larger units (časti)

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[1] Archival document with signature Pr USS 009, held in the Collection Dziga Vertov at the Austrian Film Museum.
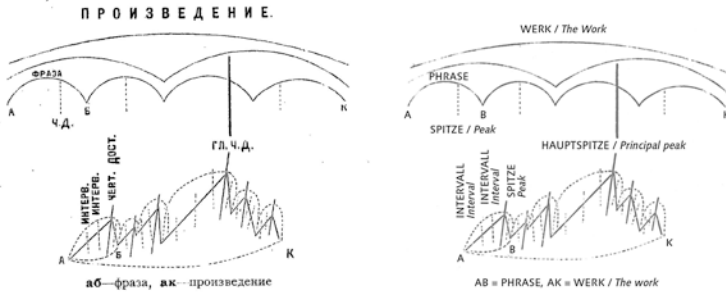
Fig. 4.1 Diagram for "My. Variant manifesta" from *Kino-fot No. 1* (1922). With a translation by Barbara Wurm

which contain phrases, the reference seems to be to reels of 300 metres in length. Vertov is unfortunately not consistent in his vocabulary. Though in these early texts he does speak of phrases, a short time later (1926), he also uses the terms episode (ėpizod), montage instant (montažnyj mig) and montage moment (montažnyj moment). In my opinion, the term episode can largely be seen as equivalent to phrase and will subsequently be preferentially used, as it is more easily apprehended in this context. If not directly indicated, the episode titles have been chosen according to criteria of content. An overlapping transition from one episode to the next, in which parallel editing is used to introduce a new theme gradually, was a method typical of Vertov. The demarcation of episodes thus sometimes becomes a fascinating challenge. It may be assumed that a phrase can be, in principle, considered equivalent to the sequence, as conventionally used in film studies, to indicate a self-contained unit of time and place, but it cannot unambiguously be clarified. In most cases, at least, this definition matches Vertov's own usage, but at one point he speaks of two different kinds of montage moments that he uses: some are delimited in time and space, but others are not. As an example of the first type, Vertov mentions the dance of the drunken women in *Kino-Eye* (Vertov 2008a [1925b]: 82). In each case, the film-maker gives these units (phrases/episodes/moments) thematic headings in his writings and diagrams, for example, "the camp attack", "the call for first aid" or "the raising of the flag", all of which refer to the film *Kino-Eye*.

A phrase is in turn subdivided by intervals into smaller units. In greater detail and borrowing from music theory, Vertov described the interval as a significant component of the *kinoglaz* concept in a lecture delivered on 5 April 1935 at the conference of the International Revolutionary Theatre League (MORT):

Kinoglaz as a theory of intervals. By interval, one should understand currents that arise between two objects. In music an interval is not described as what is within a note, but what is between two notes – between do and mi, between mi and si. Here is hot water and there is cold water. But water that is not hot and not cold, but the transition from hot to cold water. That which in the film is known as a collision between two frames. In brief, the development of the action followed this theory, for the development of the film did not come about on the basis of the individual frames, but on their interaction, on the basis of the intervals. In this light, the changes that we made in the practical work of film become comprehensible. (Vertov 2008f [1986]: 293)

The interval is among the most mysterious phenomena in Vertov's film theory and has been the subject of lively and controversial discussion by film and media scholars, which, however, can also be traced back to the condition of what has been handed down. This is because in the later printings and translations of the manifesto, the text was printed without the accompanying diagram. As Barbara Wurm critically states:

> Both parts [the upper and the lower] refer generally, however, to an implicit statistical knowledge about filmic structures, which in the given publication context quite obviously requires no further elucidation. Vertov's contemporaries were [...] well acquainted with complex calculations and their visualisation. Admittedly, in the historic reception situation text and image, theory and diagram had not yet been unlinked. Had that also been the case in the transmission of the manifesto, some interpretations of the „interval concept" would presumably (almost all are based on vague suppositions) have been less rigorously formulated (Wurm 2009: 18).

In any event, however, the interval was interpreted as the movement between the individual frames – a misconception if one does not look precisely at the graphic. It is not about the movement between the frames, but about the movement between the shots.

> At least in the concrete context of the first manifesto, nothing, for example, indicates that the „intervals " lie between the individual frames, rather they are assigned quite concrete positions in the diagram within the individual phrases. „Movement", on the one hand, and „intervals" on the other, are here thus related to significantly larger units than the individual film images and the corresponding spaces between them. (Ibid.: 19)[2]

Intervals can thus be seen as transfers of movement, as switchboards of kinetic discharges. In his manifesto, Vertov spoke several times about the organisation of movements, the smallest units of which are the intervals. Even if it is not said explicitly in this early text, it may still be assumed that Vertov is speaking of the creation of movement through editing: "Intervals (the transitions from one movement to another) are the material, the elements of the art of movement, and by no means the movements themselves. It is they (the intervals) which draw the movement to a kinetic resolution. The organization of movement is the organization of its elements, or its intervals, into phrases" (Vertov 1984a [1922]: 8).

Although the manifesto must fundamentally be understood less as a practical guide and more as a film-philosophical and theoretical statement of position, it does permit the drawing of some conclusions about the work process. When Vertov speaks of a "strict system of exact movements" and of "precision and speed" in the recording and reproducing of movement, he is giving insight into his approach and methods while making films. Precise observation and recording must assist the "cinema's unstrung nerves" to return to life:

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[2] Wurm's opinion refers to their most experienced opinions, Michelson, Annette. 1992. The Wings of Hypothesis: On Montage and the Theory of the Interval. *Montage and Modern Life 1919–1942,* ed. by Matthew Teitelbaum, 61–81. Cambridge, Massachusetts: MIT Press, or Holl, Ute. 2002. *Kino, Trance & Kybernetik*. Berlin: Brinkmann und Bose. Anke Hennig also discusses Vertov's interval terminology: Henning, Anke 2009. Die Gegenwart in der Chronik Dziga Vertovs, Vienna, Cologne, Weimar. *Maske und Kothurn* 3: 197–209.

> The meter, the tempo, and type of movement, as well as its precise location with respect to the axes of a shot's coordinates and perhaps to the axes of universal coordinates (the three dimensions + the fourth - time), should be studied and taken into account by each creator in the field of cinema. Radical necessity, precision, and speed are the three components of movement worth filming and screening. The geometrical extract of movement through an exciting succession of images is what's required of montage. (Ibid.)

For this, according to Vertov, the film-maker requires an appropriate system of recording, as distinct from the conventional scenario (or screenplay). Whether Vertov is here referring to the diagrams and tables he prepared during the process of production or editing, or whether he holds that the film itself is already the best visualisation of the new film alphabet, is, like so much else, not obvious from the text. What is, in any event, clear is the obsession of expression through movement, which has often been a reason for research to locate Vertov in the constructivist environment. Tsivian, though, argues that such a categorisation is not unproblematic:

> I proceed from the assumption that Constructivists and Kinoks were art movements in denial. Their self-images were austere and isolationist; their practices, flexible and open. As students of the avant-garde we are sometimes too mesmerized by the former to pay enough attention to the latter. When we speak about Constructivists and Kinoks we must respect their self-given names and keep track of differences in their platforms; at the same time, we must not lose sight of their overlapping practices, for entrenched as they were in their beliefs or denials, in real life Kinoks and Constructivists mixed, and techniques, ideas, and objects easily changed hands. (Tsivian 2007: 95)

Formal Procedures in Vertov's Camera and Editing Work

In order to arrive at a renewal of the film, the traditional procedures of filming and editing, Vertov demanded, first had to undergo a fundamental change. Vertov gave his cameramen precise instructions as to the shaping of the process of filming. He did not, however, understand documenting life as it is in the way that the later *Direct Cinema* did, as a purist exercise, but wished, quite to the contrary, to avail himself actively of all the new technical possibilities, to experiment with them and develop them further: "In order to achieve these aims, Kinoglaz avails itself of the filming possibilities available to the equipment, so that slow motion, microphotography, rear projection, animation, travelling shots, photography from the most unexpected camera perspectives, etc., will not be seen as tricks or exceptions, but as normal, regular, widespread filming procedure" (Vertov 2008e [1929]: 409).

One wished to test the "Kinoglaz medicine preventively on the 'guinea pig' of film etudes" (Vertov 1984b [1923]: 13). For, as the "Council of Three" (as Vertov, Svilova and Vertov's brother Michail Kaufman styled themselves in the early manifestos) wrote, the "organism of cinematography has been corroded by the terrible poison of habit. We demand to be given the opportunity to experiment on the thus afflicted organism with the antidote that has been discovered" (Ibid.). If intervals and their transitions had previously been mentioned, in a later text Vertov specified how they could already be considered during the shooting:

Movement between shots, the visual "intervals", the visual correlation of shots, is, accord-
ing to kino-eye, a complex quantity. It consists of the sum of various correlations, of which
the chief ones are: 1. The correlation of planes (close-up, long shot, etc.); 2. The correla-
tion of foreshortenings; 3. The correlation of movements within the frame; 4. the correla-
tion of light and shadow; 5. The correlation of recording speeds. Proceeding from one or
another combination of these correlations, the author determines: 1. The sequences of
changes, the sequence of pieces one after another, 2. The length of each change (in feet, in
frames), that is, the projection time, the viewing time of each individual image. (Vertov
1984h [1929b]: 90)

Montage was perceived by Vertov not merely as the organising process at the end
of a film production, but for him infused all areas of film-making. Montage thus
existed for him during observation and after observation, during filming and after
filming. Between these phases and the "final montage" (okončatel'nyj montaž),
something was in operation that Vertov termed "visual judgement" (glazomer):
"Visual judgement (the hunt for montage sections) – instant orientation in every
visual situation, in order to capture the necessary connecting shots" (Vertov 1973
[1925]: 45). In film-making the decisive step requires visual judgement, speed and
a "rush" (natisk), which could be translated as a basic attitude of enthusiasm.

Finally, Vertov also said that he was not concerned only with a thoroughly con-
structed quasi-mathematical arrangement of the individual sections. It was more a
question of effect of the individual elements of the film alphabet in combination.
These functions of linking would consequently also render the intertitles superflu-
ous, as he filmically put into practice in *Man with a Movie Camera*:

In fact, the film is only the sum of the facts recorded on film, or, if you like, not merely the
sum, but the product of "higher mathematics" of facts. Each item or each factor is a separate
little document. The documents have been joined with one another so that, on the one hand,
the film would consist only of those linkages between signifying pieces that coincide with
the visual linkages and so that, on the other hand, these linkages would not require interti-
tles; the final sum of all these linkages represents, therefore an organic whole. (Vertov
1984e [1928]: 84)

Vertov's writings provide the direction one may follow in an annotation of his
films, as will be described in the next chapter, beginning with the formal character-
istics of the image, that is, from shot size, camera angle, perspective, movement
within the image section, camera movement, contrast of light and darkness and
manipulation of time through to the length of shots. With these as a point of depar-
ture, the functions of the elements (the procedures or also the phrases) of each film
may be analysed and discussed.

Material and Condition of Prints

Vertov's legacy, in writing and on film, is preserved in several archives at various
locations. Moscow is only one of them; partial collections may also be found in
Vienna and Stockholm. In 1958, part of Svilova's material (later registered in the

estate as pervyj opis') was transferred to the Russian State Archive for Literature and Art (RGALI).[3] After her death in 1975, the second part (vtoroj opis') also arrived there, presented by her sister, Antonina Svilova.

Vertov's writings were only systematically published about a decade ago (till then only the works, articles and speeches); the first monograph on Vertov had already been written by the film scholar Nikolaj Abramov in 1962. In 1966 the first anthology of Vertov's writings was published by Sergej Drobašenko. Shortly afterwards, publications followed in what was then the GDR (Herlinghaus 1967) and in Austria (Konlechner and Kubelka 1967) extracts from diaries and other documents appeared. In 1982 the film scholar Lev Rošal' also published a monograph. Elizaveta Svilova was an archivist in the best sense of the word, creating a collection about her husband which she meticulously inventoried. In this comprehensive listing, all 321 objects which were still in her private possession at the time are described in detail (Svilova 1959).

Vertov's estate is now available for research at RGALI in Moscow, where it is divided into seven parts with further subsections (podrazdel). The first subsection of Part 1 (given by Svilova) includes scenarios, treatments and editing lists; the second subsection consists of frame enlargements from Vertov's films. Part 2 (given by Svilova's sister) is divided into three subsections, in which both Vertov's manuscripts and his articles from 1922 to 1952, as well as his speech and appearances, are archived. A large part of these writings were published by Vertov during his lifetime, and most were reprinted, some in abridged form, in 1966 in Drobašenko's anthology. By contrast, most of Vertov's poems, located in the third subsection, are still unpublished. In Part 3 Vertov's own records and his workbooks as a director, of which a total of 34 are still extant, are preserved; this is also where the diaries may be found. Vertov's articles, clipped from newspapers and periodicals, as well as contemporary reviews of his films, are collected in the so-called albums in Part 4. Letters by Vertov addressed both inside and outside Russia are in Part 5, while Part 6 contains the letters to Vertov, written mainly by foreign correspondents, writers, film-makers and journalists. Finally, Part 7 includes materials originating in the time of Vertov's activities for the agit-trains and agit-boats: instructions for official trips to the front between 1919 and 1921, filming permits for the Trade Union House (dom Sojuzov) and at Red Square for Lenin's funeral. Alongside these are also his autobiography and the document entitled "Artistic Calling Card" (Tvorčeskaja kartočka). The latter document is a comprehensive text in which Dziga Vertov, often referring to himself in the third person, takes stock of his career and his partly unrealised projects. In addition, further materials are kept here, for example, posters, the certificate of the International Exposition in Paris and the papers dealing with his trips abroad in 1929 and 1930. Elizaveta Svilova's estate is also held here.

Svilova herself transferred parts of her personal archive to the Austrian Film Museum in Vienna, or permitted them to be brought there by friendly messengers, between 1970 and 1974. This collection is thus the largest Vertov collection outside Russia and comprises approximately 2000 objects, including several unique

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[3] Rossijskij Gosudarstvennij Archiv Literatury i Iskusstva, founded in 1941.

handwritten documents and diagrams related to the films and original posters, as well as production stills and private photographs. A publication tells the story of the Vertov collection in the Austrian Film Museum (Austrian Film Museum et al. 2006: 51). The collection is also accessible online via the Austrian Film Museum's website.

Film Prints in Russian and International Archives

In Russia, all film prints, as well as stills, posters and written records, are stored and maintained in two central institutions. Here there is a differentiation between feature film and documentary material: in the Russian state film foundation (Gosfil'mofond or GFF for short) in Belye Stolby near Moscow, the emphasis is on collecting feature film material, while in the Russian state archive for film and photo documents (RGAKFD) in Krasnogorsk, documentary material has been held since it was founded in 1926. Until 1918 all film and photo documents were the private property of those who undertook production. In the years 1918 and 1919, production, storage and use of all film and photo documents were transferred to the state by Soviet decree. Gosfil'mofond was constructed near Moscow by order of the Soviet government as a state film archive as early as 1936/1937. Due to the threat of war, the Soviet films and negatives were evacuated but subsequently reevacuated for permanent storage back to Belye Stolby.

Vertov's filmic work, though, may be found in both archives, which is significant for the distribution of his films in the West, especially for the transfer of film prints to archives in the West. Previously, researchers had scarcely had access to the original nitrate material (negative and positive). They researched according to the 35 mm prints circulating in the West and even 16 mm reduction prints. The negatives, and thus the oldest materials, had been given by Gosfil'mofond to the RGAKFD in the 1950s/1960s (after striking safety prints for its own collection) and have been stored there since then. Prints for archives in the West were still, however, being struck in Belye Stolby, due to Gosfil'mofond's better position in international networking, i.e. exchanged or sold. This was largely made possible by membership in FIAF. Discrepancies in content and length of the prints are, however, more the rule than the exception. During Vertov's lifetime, the films were already re-edited and the director himself also revised his films.

Re-editing of film prints was a basic fact of daily life at Gosfil'mofond (especially during the 1950s/1960s); on the one hand, adaptations were undertaken for visual reasons, for example, existing intertitles would be replaced by intertitles using a more contemporary font. On the other hand, revisions would also be made for political reasons. During the increasing distancing from Stalinism that took place in the 1960s/1970s, some scenes showing the dictator which had been inserted due to pressure from either Stalin or the party in 1936/1937 were removed from Vertov's films.

The papers of the Russian censorship authorities (Glavrepertkom), which contain information on permission to screen films following review, are preserved in the documents archive ("bumažnyj archiv") of the GFF. To these documents have been added, in some cases, later published montage lists of individual films. Some Vertov films are among those thus enriched. While only the intertitles were noted for Vertov's earlier films, the content for the later films includes shot-by-shot descriptions. Such "measurements" of the cinematic legacy were part of the duties of new GFF staff members from early on and were carried out for a great many films.

But not only censored film prints are abundant in Western film archives; there is also 35 mm material duplicated incorrectly by present standards. The mistakes of the past include the erroneous printing of full-frame nitrate silent prints (1:1.33) to acetate stock using the format of sound films (1:1.17). With the introduction of acetate film (also known as safety film), the problems of the highly inflammable nitrocellulose stock seemed to have been solved. Hectic copying activity began at archives, and, under the slogan "Nitrate won't wait", the aim became to copy old holdings as quickly as possible. At this point in time, the beginning of the 1950s, no ethic of restoration had yet been established, and many mistakes (from today's vantage point) were made due to a lack of consciousness for the preservation of formats.

Thus, in creating a positive print from a negative, the use of a sound film gate in the printer results in part of the frame not being exposed. This means that the left-hand margin of the frame remains black at the end of the printing process, i.e. approximately one-sixth of the image area is lost. Today, restorers and archivists are trying to repair the damage thus done in the past, sometimes having the luck to obtain an original camera negative or at least a positive nitrate print from the time, as was possible with *Man with a Movie Camera*. Above all, the consciousness in Western film scholarship of the historical meddling to which Vertov's films were subject is of great significance, as previously most of the prints that had been studied were those emanating from Gosfil'mofond to archives worldwide. Even when information had been available regarding additional prints, access was still impeded by political and practical circumstances.

Where not otherwise specified, I refer in my work to the prints preserved at the Austrian Film Museum in Vienna, which are largely identical to the prints in Gosfil'mofond. The director of Gosfil'mofond at the time, Viktor Privato, was very supportive of the Film Museum, founded in 1964, which included providing prints of Vertov's films, for almost all of which duplicate negatives have meanwhile been made in Vienna (ibid.: 274). The early *Kinonedelja* and *Kinopravda* newsreels are exceptions. The editions of Kinonedelja became part of the Austrian Film Museum collection soon after their discovery in Sweden. In 2014 the holdings at the Swedish Film Institute (SFI) and the Austrian Film Museum were compared again, and the missing editions are now available in electronic form within the framework of the *Kinonedelja Online-Edition*.[4] An especially important exchange with

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[4] Cf. https://www.filmmuseum.at/sammlungen/special_collections/sammlung_dziga_ vertov/kinonedelja online_edition [last accessed: 26.8.2015].

the RGAKFD, with which the Austrian Film Museum maintains intensive academic contact, took place in the winter of 2005/2006. Positive prints of all available *Kinopravda* editions were transferred to the Austrian Film Museum for its collection.

The Individual Works

For practical reasons but also in order better to understand the history and evolution of Vertov's work from the newsreel compilations to the complex films, I would like to proceed chronologically. In doing so, the description of the individual films is divided into four sub-aspects: at the forefront is the location within the history of film and production, although for each only a few central events or peculiarities are selected and formulated. No historical or formal investigation of Vertov's films would be meaningful without looking at the current state of extant prints and research; a subsection dealing with the state of prints is added here. The title "Available Film Prints" is somewhat expanded and also includes original lengths and details from other filmographies. Where it seems useful, these are also supplemented with information from montage lists. The third subsection deals with contemporary international press reviews and opinions from Vertov's contemporaries. These documents are available in the Vertov collection and some have been published in English translation by Yuri Tsivian (2004a).[5] Finally, notable formal characteristics that have been noticed during viewing and annotation, as well as via the depiction in graph form, are summarised for each film and, if possible, compiled according to the dominant in Kristin Thompson's sense of the term. The dominant can be regarded as the main formal principle, which organises the techniques used in an artistic work or a group of works to a whole. It defines a hierarchy among them according to their potential of alienation (ostranenie) in the Šklovskian sense: "Finding the dominant provides a beginning for analysis" (Thompson 1988: 44). Thompson based her theoretical approach on the writings of Boris Ėjchenbaum, but especially on the later development of the concept of the dominant by Tynjanov and Jakobson. The latter regarded the dominant equally important both for the theory of genres and the stylistic evolution: "What differs one genre or one style one from another is not so much the substitution of a single structure and/or function with another one, but the shift in the hierarchy of values of simultaneously present, partly being in tension with each other, structural elements and functions. The dominant rules and transforms all the other components and guarantees thus the integrity of the artwork" (Jakobson 1979 [1935]: 212). Complementary contextual information about the individual films, the condition in which they now exist and interpretations, may also be found further on.

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[5] I wish to thank Aleksandr Derjabin and Yuri Tsivian for making the Russian article available to me.

One remark regarding terminology should be delivered in advance: a reel represents the roll of film originally about 300 metres long (sometimes now referred to as a split reel) which were often spliced together in archives in reels of 600 metres. The effects of this pragmatic but unfortunately rather obscure procedure on the formal design of Vertov's films and on historical film documents in general and, subsequently, on the public are only gradually seeping into the consciousness of film historians. Even archive staff were apparently not aware of the implications of these interventions; thus, in the past, for example, reel titles were not seen as relevant information and removed, or the reels, created and conceived as units of 300 metres, were consolidated together. Fortunately, in most cases the cue marks have been preserved. The narrative units are thus at least preserved and for Vertov's films may be understood and commentated, according to the extant materials. A particularly interesting case illustrating this is that of the most commonly circulated version of *Man with a Movie Camera*, in which the reconstruction of the original reel divisions has contributed greatly to understanding of the film. Such a reconstruction was a central concern of my engagement with Vertov's most famous film and was carried out in collaboration with Yuri Tsivian and will be later presented more comprehensively.

Kino-Eye: "An Army of Film Observers"

Kino-Eye, produced by Goskino (Feldman 1979: 88),[6] was originally planned as a six-part work and was made at a time in which Vertov was still full of enthusiasm and gathered his *kinoki* around him in a spirit of new departures, in order to translate the concept of *kinoglaz* into moving pictures. He wished to send out into the world an entire army of film observers and film scouts with their own cameras (Vertov 2006 [1947]: 85). Vertov used the term film observers in a conscious borrowing from a war metaphor, and the Russian word could also be understood as an "explainer". Vertov's vision of an army of film observers swarming out is a comprehensive concept that brings television to mind more than film. These musings have gained an additional dimension in our times with the Internet and its possibilities: "This brainchild has been hyperbolised as a stunning vision prefiguring late twentieth-century TV news. One could go even further. It is a collectively authored, interactive, 24-h news channel perpetually delivering not just new stories but new perspectives on the world" (Hicks 2007: 18, Vockenhuber 2009).

As Jeremy Hicks describes, Vertov is here following a journalistic tradition established by the Bolsheviks: the workers should participate as correspondents (rabočij korrespondent) in reporting on themselves. According to Hicks, this

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[6] Feldman's indispensable reference work is here more precise than the customary credit to Goskino as the sole production company, as for all films prior to Vertov's leaving Sovkino, he also credits Kul'tkino. Kul'tkino was at the time the documentary film department of Sovkino, headed by Vertov.

phenomenon was very familiar to Vertov: "Vertov can be seen as extending the participatory principle to Soviet cinema in his conception of the Cine-Eye movement, modelled on the workers correspondents" (Ibid.: 17). The fact that Vertov not only gave clear instructions on how to capture the subjects but repeatedly emphasised that the camerawork itself was also to be documented is expressed, for example, in a letter written during the shooting of *A Sixth Part of the World* (1926, Dziga Vertov). Boris Volček is among those who has reported on concise instructions verbally delivered by Vertov for the purpose of exercises to prospective camera operators (Volček 1976: 126). As early as 3 years before the most effective deployment and integration of this idea in *Man with a Movie Camera*, the director wrote to the cameramen Benderskij and Judin on 10 July 1925:

> I remind you once more to film several moments of the cameraman's work, more or less striking. For this use the motif of the snowstorm or the bivouac! If you film each other, then always with the camera in the picture – the camera must definitely be seen well, either in the hands of the cameraman or next to him, if he is occupied with something else. (Vertov 1996 [1925]: 193)[7]

Vertov called both the professional and the amateur cameramen film observers (kinonabljudateli) and film scouts (kinorazvedčiki). The word razvedčik is customarily used in connection with spies in the service of the Communist Party. Hicks argues, however, that Vertov intended the term to refer less to spying for surveillance purposes as to educational work for the common good (Hicks 2007: 36). In his text *Artistic Calling Card*, Vertov mentioned, speaking of himself in the third person, how important to him was this democratic access, which sole authorship rejects:

> 18. "Humanity of Kinoks" - one of Vertov's earliest idea was to create an army of film scouts and Kinoks in order to abandon single authorship and proceed to mass authorship, to organize an "I-See" montage, "not a coincidental but rather a necessary and all-encompassing global review of the world every few hours". (Kinofot No. 2)
>
> 19. Observation, Experiment, Measurement. I don't simply observe and gather observations but rather organize and attempt, I experiment, study and take the phenomena into my own hands (Kinofot No. 5). (Vertov 2006 [1947]: 85)
>
> 45. Organizational plan for the information gathering work of Kinoglaz. Film scouts. Film observers. First attempt to attract young pioneers to the investigation of the visible world. The first group of young observers is organized within the pioneer group Krasnaja Presnja (leader B. Kudinov). Discussion evening includes outdoor screenings for workers' children. Film group connects to and corresponds with rural folk and with pioneers in other cities of the Union - with Rybinsk, Voronež, Barnaul, among others. Diary about film observations. (Vertov 2006 [1947]: 94)
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> 47. The Red Field - Attempt to organize a first film scout group of village pioneers in the countryside. (Group Leader Komarov Viktor, Chairman of the first P. Baulin-gathering, Secretary Levin). (Vertov 2006 [1947]: 95)

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[7] Together with this letter, Aleksandr Derjabin also published a comprehensive commentary and the filmographies of both cameramen.

73. A network of film correspondents spread across the entire Soviet Union. A second network of voluntary film correspondents (Kinoglaz Circle, Kinoki-observers, ODSK Circle). A continually growing film archive on the theme of Revolution and reconstruction in the USSR. (Ibid.: 108)

The pioneers were very dear to Vertov's heart, as can be felt most clearly in the film *Kino-Eye* and, repeatedly, in his writings. For the director, they were the bearers of hope for a new generation of film-makers and, alongside the political implication, also the pioneers of the renewal of the Soviet cinema. He described gatherings at which the new *kinoki* were not only instructed in the procedure of filming according to the *kinoglaz* concept but also were constantly exposed to technical innovations in motion picture and still cameras. It was, first and foremost, Vertov's brother, Michail Kaufman, who, as an inventive designer, accepted every challenge in order to fulfil the *kinoki's* demand that they be able to "take life by surprise": "One device after another is invented and constructed for the group's experimental and research work. Cameraman Kaufman never refuses one of Vertov's proposals. Nothing was impossible for him" (Ibid.: 111). In the course of the text, Vertov then goes into more detail and precisely describes the various sorts of equipment that one had developed: the first attachment for aerial photography, the first universal fixed mount or the first miniature camera mount. In addition, for the film *A Sixth Part of the World*, the group designed new cameras and even tried to work with underwater equipment, though without success (ibid.: 114).

Available Film Prints

According to the *Repertuarnyj ukazatel' kinorepertuar*, the length of *Kino-Eye* is 1697 metres (six reels) (1931: 88). This reference work lists all films which had been examined by the Russian censor up to the 1 October 1933. An editing list from 1924, however, gives the length as only 1516 metres.[8] The differences between the Austrian Film Museum print and the editing list are primarily in the last reel of the film. In another version of the film, possibly an earlier one, the sanatorium sequence present in the Austrian Film Museum print may be missing; at any rate the intertitles give no indication of the sanatorium in the form of exclamations or statements by the inmates. Most prints in circulation have, for reasons that are not clear, two further minutes of film appended, which, according to Tsivian, could be a trailer for two later films (2004: 407). In the historical filmographies, for example, that of Seth Feldman, the total length of *Kino-Eye* is thus given as 1791 metres. Feldman, incidentally, gives the length of *Kino-Eye* from *Repertuarnyj ukazatel' kinorepertuar* as 1627 metres (adopted by Tode and Tsivian in their filmographies), which, after examination of the original record, cannot be explained (1979: 88). Perhaps a copy-

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[8] Archival document with signature V 038, held in the Collection Dziga Vertov at the Austrian Film Museum.

ing error is responsible. The print preserved at the RGAKFD is 1804.5 metres long, while the GFF/Austrian Film Museum print – from which, incidentally, the puzzling attachment has been removed – measures 1593 metres.

Critical Reception in the 1920s/1930s

From the beginning of his career, Vertov was confronted by diverging reactions from the press and from his contemporaries; those who attacked his films as incomprehensible and misleading were critical in the extreme, though many praised the director's artistry in editing and film technique. What was more serious for his opponents was Vertov's refusal (which was part of the *kinoki's* programme) to work without a script or a shooting plan. Even granting that no screenwriter could invent something better than real life, especially as we don't really notice this fact in daily life (T. 1924: 4), Vertov takes the great risk, in the view of his critics, that the public might not understand a potential Communist message. One could scarcely formulate the criticism more concisely than Vladimir Erofeev, one of Vertov's great rivals in the field of documentary film: "After one has seen this film it becomes quite clear that the sharp cinema eye and its swift hands lack a guiding Communist head" (Erofeev 1924: 2). This was the period of the controversy between Eisenstein and Vertov, as the artists competed to be the best in fulfilling the Party's ideas and to reinvent art, or even, as Vertov declared, not to want to create art. It is known that Vertov had to include a short film by Eisenstein, entitled *Glumov's Diary* (1923, Sergej Eisenstein) in *Kinopravda No. 16* (1923, Dziga Vertov), to which Vertov punitively responded by absenting himself from the shooting (Cavendish 2013). This revealing and emotionally charged discussion was carried on in various journals and public appearances in which Eisenstein pointed out a significant but nonetheless contradictory element in Vertov's work and his theory of cinema: the problematic balancing act between programmatically formal innovation and the rejection of art (Tsivian 2004a: 125–156).

One thing becomes clear in light of the press criticism at the time that *Kino-Eye* was being made: one was still working through the question as to the nature of the Soviet film industry and was attempting to find an answer in the contrast with popular imported films. For how could the people be won over and enthused by the new ideas in the Soviet cinema? Vertov gave his opinion on this in several articles and discussed the *kinoglaz* concept as a meaningful way for the documentary, but Michail Kaufman, too, also published regularly on film questions.[9] Among other things, Kaufman described the shooting during the first *kinoki* expedition into the Kuban region. Shooting there was no easy matter, but the film team encountered great interest on the part of the local population. Kaufman reported on film

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[9] Cf. further articles, e.g. Vertov, Dziga. 1924. Put' k kino-oktjabrju. *Literaturnaja Rossija* 35; Vertov, Vertov. 1926. Kino-glaz i bor'ba za kinochroniku. *Sovetskij ėkran* 15; Vertov, Dziga. 1926. Kino-Glaz. *Na putjach iskusstva*; Vertov, Dziga. 1924. Kino-Glaz. *Kino-nedelja* 36.

screenings in the steppe, depicting "film dramas", to which the peasants arrived using many varied means of transportation. The *kinoki* left the screening, out of protest at the programme (Kaufman 1925).

In any event, the press praised Vertov's *Kino-Eye* as pioneering the development of the Soviet cinema, and emphasis was frequently laid on the outstanding technical and formal craftsmanship – it was one of the best achievements of the Soviet newsreel (Melik-Chasiabov 1924). Whether the documentary film thus had more than a transitory function on the way to an authentic artistic-revolutionary creative cinema was something that was doubted, especially by Grigorij Boltjanskij. Like Vertov, he had studied at the Petrograd Institute for Neuropsychology and came to the cinema in 1917. In 1920 he became the director of the newsreel department of the Moscow Film Committee and as such Vertov's immediate superior. "I am here not speaking of the form, which can change, can change, enrich itself, etc. But it will be a real feature film, not like the ones which are being made nowadays, one that will be sustained by the sentiment and romance of the proletarian struggle, by sagas and fantasy" (Boltjanskij 1924: 19).

That the film was too playful, the nascent director used too many camera and editing tricks and his observations were too superficial were faults found even by Chersonskij, who was still one of Vertov's faithful supporters (1925: 25).

Formal Characteristics of the Film

In Vertov's first feature-length film, the number of standard shots makes up approximately 82% of the total, while the intertitles come to about 6%. This portion is quite small, when compared with later films; only in *Man with a Movie Camera* and *Enthusiasm* did Vertov insert less explanatory text in title form. Unfortunately, too little is known about actual screenings, as it is not improbable that performances were accompanied by explanatory commentary. We also know that Vertov himself acted as the speaker at screenings when he travelled with the agit-trains (Heftberger 2015).[10] The variety of ways in which Vertov marked the shot transitions, compared to the later works, is noteworthy, which can also be gathered from the table in absolute numbers. Dissolves are clearly the most frequently deployed and they were experimented on inventively with iris masks or fade-ins and fade-outs. *Kino-Eye* stands out in this respect; in no other film was the team so creative with the design of shot transitions. This is also true for the film's animated special effects sequences, which remain a peculiarity of early Vertov. They thus also appear in *Kinopravda No. 21* or *Kinopravda No. 23* (1925, Dziga Vertov). Animation – later as well – is used only sparingly. The frequent use of split screens and complex transitions is also noticeable (Fig. 4.2). Alongside many missing frames and film damage, a total of 20 cue marks and five reel changes are annotated. Only diegetic text is used in the film and can be seen in 102 shots.

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[10] I am very grateful to John MacKay for the biographical information.

Fig. 4.2 Complex transitions in *Kino-Eye*

The annotated intertextual duplicates provide, as already mentioned, information about those shots which Vertov used again in other films. In *Kino-Eye* there is a short sequence, the iconic view of Tverskaja Street in Moscow, which is later inserted into the films *Stride, Soviet!* and *Man with a Movie Camera*. In addition, a sequence at the end of the film lasting approximately 1 min was incorporated into *Kinopravda No. 21*.

The camera movements in *Kino-Eye* are frequent and used in a complex form. The number of pans left and right and tilts down and up can, in fact, only be compared with that in *Man with a Movie Camera*. The horizontal pans, however, are often almost imperceptible, apparently mainly serving the arrangement of the frame or accompanying people a short distance with the camera in order to keep them in shot. Travelling shots, too, above all left and right and forwards and backwards, are a favourite means of accentuating movement within the film. For example, the camera uses long travelling shots to follow pioneers as they march or accompanies them as they walk through the market, a motif that recurs in Vertov's films. My hypothesis is that only in later films does Vertov establish movement through editing and is still primarily working with camera movements in his first film. In addition, this film scarcely fell back on stock footage, i.e. Vertov could give his cameramen direct instructions, which could have had their effects on the variety and frequency of camera movement (Fig. 4.3).

This variety and frequency, of both the camera movements and the creative design of the shot transitions, is sustained by a further higher-level concept. As the dominant, one could say that the formal methods (especially those just listed) fulfil for Vertov the sense of spatial and temporal manipulation. Dissolves seem to enable Vertov effortlessly and elegantly to overcome distances great and small, jumping back and forth between village and city, and abbreviating events, for example, the march on foot into the village, that by definition requires time. The dissolves combined with an iris mask have an impressive effect: it is as if a gate to another location opens, through which we may stride. The camera mask takes on the function of a telescope, visually and narratively, bringing events unfolding at a distance closer

Fig. 4.3 Production still taken during the filming of *Kino-Eye*; Dziga Vertov stands at left

to us. The method is still more apparent in the shots that run backwards, where the clock is reversed in a concrete sense. Elsewhere, I look more closely at this trick of Vertov's, but mention it already here, as it is a part of an overall concept.

Stride, Soviet! The Shot Library

The emphasis of Vertov research has hitherto been on the later films, while the feature-length films of the director's first years have received relatively little attention. The reasons for this have been, on the one hand, the access to film prints and, on the other hand, that the early works have principally been considered of lesser interest. A rare formalistic analysis of *Stride, Soviet!* (1926, Dziga Vertov) was carried out by Harvey Denkin (1977), but the film has otherwise not been discussed and analysed much. It was no longer a newsreel with short filmic parentheses and an abundance of subjects, but not yet a fully constructed work like Vertov's later films; it is hard to avoid the impression that the second full-length film, after *Kino-Eye*, remains strangely fragmentary. Comprehensive reflections and scenarios by Vertov regarding this film project do exist, as two documents show. Aleksandr Derjabin has published two documents which record different approaches. While in "The Mossovet. Plan of the Film" (Vertov 2004a [1926a]), Vertov attempted a threefold division into yesterday, today and tomorrow, in "Mossovet Szenarium" (Vertov 2004b [1926b]) he painstakingly listed all locations and subjects reel for reel. However, the entire execution was finished quickly, suggesting that neither preparation nor shooting were of long duration. The director's general work method is here nonetheless revealed; Vertov basically worked on and shot not just one film, but was already collecting material for several future projects. The film historian John MacKay also describes this *kinoki* work practice:

> Both Stride, Sovet and the first, unrealized version of Man with a Movie Camera – unrealized because of Vertov's dismissal from the Sovkino studio at the beginning of 1927 – were byproducts of the extraordinarily complex One Sixth of the World production, which took up most of 1925–26. Stride, Sovet, shot virtually entirely (with the exception of extensively incorporated archival footage) by kinoc Ivan Belyakov with assistance from "film scout" Ilya Kopalin, was made very rapidly on commission from the Moscow City Soviet between December 1925 and the end of March 1926. (MacKay 2007a: 42)

In *Stride, Soviet!* everything was supposed to revolve around the subject of homeland. Abramov quotes Vertov's own writings, in which the director affirms a close affinity between his three films of the 1920s, namely, between *Kinopravda No. 21*, *Stride, Soviet!* and *A Sixth Part of the World*: "All these are only parts of one and the same massive structure: USSR!" (Ginzburg 1965: 26). Vertov had significant difficulties in the release of *Stride, Soviet!* As was reported in the review "Počemu Dziga Vertov uvolen iz Sovkino" (1927), the premiere caused a furore, because the Moscow municipality (Mossovet) had not accepted the film. In his work for the newsreel, Vertov had learned to develop methods for the organisation and archiving of the great abundance of material, if one wished to categorise, arrange and illustrate it. In the "Artistic Calling Card", he emphasised that he saw himself not just as a pure archivist of facts; rather the material constituted a stimulus for further works: "We don't only need films, we need films that beget films" (Vertov 2006 [1947]: 123). Vertov envisioned a "constantly growing film archive on the subject of revolution and development in the USSR" (Ibid. 86), from which not only full-length films or incidental reports could be produced, "but rather a necessary and all-encompassing global review of the world every hours" (Ibid.). In his writings, Vertov repeatedly speaks of his concept of a shot library as a register of shots that can be reused in editing in a variety of contexts. In the cutting-room sequence of *Man with a Movie Camera*, which filmically illustrates this concept, there are many duplicates and alternative shots of motifs and subjects that are familiar from *The Eleventh Year* (1928, Dziga Vertov). In *Three Songs of Lenin*, for example, there is a long, alternatively edited sequence with shots of the construction of the Dneprostroj power plant in present-day Ukraine which has a great similarity to several subjects recorded by Vertov in a diagram.[11]

The most impassioned formulation, reminiscent of Eisenstein's film-fist (kino-kulak), can be read in Vertov's 1926 article "Fabrika faktov". Although it is weakened by the sub-heading "Suggestion", the director vehemently insists on a central location for the nonnarrative film:

> Simply: the FACTORY OF FACTS (By way of proposal). Filming facts. Sorting facts. Disseminating facts. Agitating with facts. Propaganda with facts. Fists made of facts. Lightning flashes of facts. Mountains of facts. Hurricanes of facts. And individual little factlets. Against film-sorcery. Against film-mystification. For the genuine cinematification of worker-peasant USSR. Dziga Vertov. (Vertov 1984d [1926a]: 59)

Prefaced by these militant lines, Vertov begins by explaining in detail how such a film production facility should be organised. A centralisation of both the creative staff (cinema and theatre) and that of production, laboratory, storage and editing was seen as indispensable, which anticipates Vertov's later plans for a creative laboratory (tvorčeskaja laboratorija). The director invoked similar demands made by the film critic Aleksandr Fevral'skij in a *Pravda* article of 15 July 1926 and vehemently emphasised that he did not want to found a FĖKS, no "factory of attractions" in Eisenstein's sense, no "factory of kisses and doves", nor either a "factory of death"

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[11]Archival document with signature V 072, held in the Collection Dziga Vertov at the Austrian Film Museum.

(Vertov 1926: 6). He was striving, rather, for "the union of all types of kino-eye work, from current flash-news-reels to scientific films, from thematic 'KINOPRAVDAs' to stirring revolutionary film marathon runs" (Vertov 1984d [1926a]: 59).

Harvey Denkin's article "Linguistic Models in Early Soviet Cinema", as one of the few works of film scholarship that follows a consistent application of formalistic models of film as language, should not go unmentioned (also Hicks 2007: 43). By way of introduction, the author describes the popularity of the concept of inner speech among the Russian film-makers, theatre directors and scholars of the 1920s. Denkin makes particular reference here to the writings of Lev Vygockij, such as *Thought and Language* from 1934, that draw on the experiments of the French developmental psychologist Jean Piaget. Eisenstein in particular had developed the "montage of attractions" in the mid-1920s, through editing, into a form of linguistic communication also aimed at inner speech. In Eisenstein's view, it was possible to understand the resources of film, including camera angles and lighting, as analogous to the means of expression afforded by speech and to analyse them accordingly (Eisenstein 1977 [1934]: 120). Subsequently, Denkin uses Vertov's *Stride, Soviet!* to show how the director employed discursive forms as structuring procedures. The intertitles functioned both as direct messages from an unknown speaker and as text, subsequently visualised as image content. Denkin provides a rudimentary record of the structure, in which the succession of motifs (buses, loudspeakers, titles) in two selected sequences are depicted in graph form. As a visualisation, however, it is not very informative. Although he remains close to the film, this results in his methodology lacking in specificity. It is in reading the film as Vertov's experiment with linguistic structures in filmic form that he deserves the most credit. The question is nonetheless raised as to whether *A Sixth Part of the World* or *Three Songs of Lenin* might not have been more rewarding examples, as the rallying call (in *A Sixth Part of the World*) or the literary song structure (in *Three Songs of Lenin*) is more obvious.

Available Film Prints

According to *Repertuarnyj ukazatel' kinorepertuar* (1931: 73), the original length of *Stride, Soviet!* was 1650 metres (seven reels); this is also the length given by Tsivian. Both the extant GFF/Austrian Film Museum print, at 1481 metres, and the RGAKFD print, 1490 metres long, are thus some 300 metres shorter than the original version. According to Tode, censorship may have resulted in cuts, with the author referring to indications in the contemporary press: "The shots of Trotsky were later removed from the film (Listow) and 'it was no longer shown in the bigger theatres; it has been cut up' (Kunstblatt, May 1929)" (Tode and Gramatke 2000: 225). The knowledge of similar cases that befell Vertov's films make such suppositions plausible, even if difficult to establish with certainty.

A list of intertitles with handwritten remarks by Svilova gives the film's length as 1352.05 metres.[12] A comparison of the list with the film print, however, reveals only minor discrepancies in the titles, rendering it impossible to determine any major flaws in the print by this method. A noteworthy detail is, however, brought to light in a comparative examination: although the Moscow municipality (Mossovet) commissioned the film, the name Mossovet was replaced throughout the intertitles at a later point in time with Sovet.

In addition, *Stride, Soviet!* is one of the few films in which reel changes are (still) identifiable, due to their specific visual marking. At the beginning of the film, following immediately after the main title, the first reel is announced by the Roman numeral I. The image, however, does not remain static, but the interior of the numeral fills itself with white in a simple animation, thus documenting the passage of (film) time. Apart from the advanced design of the reel changes in *Man with a Movie Camera* and *Kino-Eye*, *Stride, Soviet!* remains, according to our current state of research, one of the only Vertov films with this special feature. In *Kino-Eye* the reel changes are marked with exceptional creativity; for example, an (animated) hand writes the words "End of the first reel" on a white wall. Not all reel changes have been preserved in the GFF/Austrian Film Museum print, but they exist in the RGAKFD print.

Critical Reception in the 1920s/1930s

No discussion of the effect of *Stride, Soviet!* or of Vertov's self-image as a film-maker would be complete without Viktor Šklovskij's article "Where is Dziga Vertov Striding?" Šklovskij, one of the main representatives of Russian Formalism and himself a screenwriter, perceptively remarked on the contradictory way in which Vertov applied his advanced theories to film practice. But the author criticised not only Vertov's inconsistent handling of staged footage but also discussed the shot library:

> Dziga Vertov cuts up newsreel. In this sense his work is not artistically progressive. In essence he is behaving like those of our directors whose graves will be decorated with monuments, who cut up newsreels in order to use bits in their own films. These directors are turning our film libraries into piles of broken film. (Šklovskij 2005 [1926]: 287)

Vertov, however, also had his champions in this matter. In his verbose riposte "He Strides to Life as it is", Izmail Urazov defended the director – it requires great ability to use archive material properly and the foundation for that is editing:

> Editing, like shoemaking, must be accomplished in such a way that the viewer does not notice it. Therefore editing long sections is bad: it wearies, one begins to feel that one is in the theatre, not in the cinema; for here not all the possibilities of the film are used – its rhythm, its tempo [...] Vertov has the ability to find the necessary position, the first, the second, the third. He knits everything into a whole, he gives everything he can and assembles it all himself in your consciousness. (Urazov 1926b)

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[12]Archival document with signature V 059, held in the Collection Dziga Vertov at the Austrian Film Museum.

Vertov, on the other hand, wrote angrily in his diary: "Is it worth proving to my hypocrite that every fact from life recorded by the camera represents a film-document even if it's not wearing a medal or a dog collar" (Vertov 1984f [1927]: 166).

The majority of the reviews, as well as Vladimir Fefer, journalist and director of the Mežrabpomfil'm press bureau, praised the film as a masterpiece (Fefer 1926) which opened the public's eyes to the manifold richness of the city of Moscow and the varied tasks of the Moscow municipality. Mežrabpomfil'm was a commercially run production studio in Moscow which had been founded through the initiative and with the financial support of the Workers International Relief (WIR). A comprehensive publication about it entitled *The Red Dream Factory: Mezhrabpomfilm and Prometheus 1921–1936* was edited by Günter Agde and Alexander Schwarz in 2012. Even in a review with the title "Zapros Goskino" (1926) the influential *Pravda*, the rhetorical question was asked as to when the film would finally arrive in the cinemas. Although Vertov unceasingly spoke of producing his films without a script, the critics noticed a structuring of *Stride, Soviet!*, which manifested itself in the many intertitles and the clearly demarcated thematic blocks:

> The film's great pathos is based on the subject's firm backbone and in every shot a certain theme is developed. The newsreel here ceases to be a newsreel – a subjectless series of shots, as in the Sovkino-Journal – it becomes a narrative, a film lecture, in which each shot proves something; it becomes a harmonious whole, with a beginning, an escalation of the plot and a resolution. (Osipov 1926: 16)

Here it is notable that a system of sequences and moments of intensification, in which every shot contributes to its development, is under discussion. Osipov even went so far as to attribute a narrative quality to Vertov's film, in which form and content are not contradiction, but complement and strengthen one another.

Formal Characteristics of the Film

In *Stride, Soviet!* the proportion of intertitles is small, about 16%. The standard shot type, by contrast, accounts for approximately 77% of all shots. This ratio incidentally is comparable to that of *Three Songs of Lenin*. In other ways, too, a similar pattern manifests itself for both films, as far as the distribution of the shot types, i.e. there are scarcely any unconventional transitions. The reason for this may be that Vertov's period of the greatest experimental creativity lies between these two works (i.e. 1926 to 1934). A higher proportion of dissolves is noticeable, which – I hypothesise – indicates the dominant of the film and will later be dealt with more comprehensively. Alongside missing frames and film damage, a total of five cue marks and six reel changes are annotated. Of the 76 shots in which there is text, the text is superimposed twice; in the remaining such shots, the text is diegetic.

Vertov had already used six shots in *Kinopravda No. 21* and one (the view of Tverskaja Street) in *Kino-Eye*. Nine further shots, mainly those in which NEP people are seen dancing (Fig. 4.4), are later reused in *A Sixth Part of the World*.

NEP stands for New Economic Policy, an economic political concept originated by Lenin in 1921. Among its provisions was a partial permission to engage in private business once more, in order to restart the economy and improve supply.

Two sequences from *Stride, Soviet!* reappear in *Three Songs of Lenin*: a longer fire scene inserted as a block, as well as a soldier on horseback in the snow. Although the camera pans quite a lot, there are – as the graph shows – very few travelling shots compared to other Vertov films. *Stride, Soviet!* basically functions more through editing than through camera movements. The film is a true display of information pyrotechnics, in which many subjects are dealt with and large contexts are to be explained – from the sanitary conditions and educational policy of the struggle against unemployment and prostitution to traffic safety. The struggle against enemies and saboteurs is an important theme which is addressed throughout the film. Too much visible use of the camera would work against the argumentation, and long travelling shots require too much time, which can be used to establish new semantic links.

The focus is on the Soviet city dweller, active in the most diverse areas. These activities are depicted through dissolves in an accomplished and educationally meaningful way. A typical editing pattern consists of the exchange of views between person and action – to put it more precisely, the alternation between the head and hand. Sometimes these alternations are even repeated several times. The dissolve is an elegant and visually impressive means of presenting such facts in a single image and may ultimately be identified as the film's dominant.

This is supported, on the one hand, by its frequent appearance and, on the other hand, by the way it emphasises the film's superordinate theme: the importance of the Moscow municipality with its extremely complex maintenance tasks. After *Stride, Soviet!* Vertov scarcely used dissolves, until they once more appeared

Fig. 4.4 Sequence from *Stride, Soviet!* which also appears in *A Sixth Part of the World*

prominently in *Three Songs of Lenin*. The dissolve's function is, however, very different in each film. In *Stride, Soviet!* it is used to explain the infrastructure and the work of individuals as well as possible, whereas in *Three Songs of Lenin*, it strengthens the film's lyrical tone by making the transitions more fluid. For Tsivian, it is here that the term "metallisation of people", described by Aleksej Gastev (Hellebust 1997), manifests itself. Vertov had a high regard for the constructivists in the 1920s and visualised their idea in his film: "Take three frames from another such sequence, in which a worker is – almost literally – dissolved in a spinning part of his machine-tool. Another cyborg is born!" (Tsivian 2004a: 159). The three dissolves in Fig. 4.5 follow each other in rapid succession in the film and constitute a unit.

A Sixth Part of the World: Exotic Images

Travelogues are short films that explore locations, usually including ethnographic content which rapidly gained popularity in Russia from 1907 on, after the Moscow office of the Pathé company released the first film in the series *Putešestvie Po Rossii* (1907–1916) (Sarkisova 2007: 22). The business of scenic films became increasingly lucrative, and up to the time of the First World War, both the large foreign companies (Pathé and Gaumont) and local studios (e.g. that of the Russian film pioneer Aleksandr Chanžonkov) were engaged in their production. One was thereby concerned with covering a broad spectrum of exotic locations, and in some films, in order to improve the effect, documentary footage was combined with staged scenes.

The situation was altered with the October Revolution; the travelogues and similar works that the Soviet authorities found in storage at the pre-revolutionary studios of Chanžonkov, Drankov and others aroused little interest and were allowed to deteriorate. Although there was an increased desire to deploy film as an educational art form for the purposes of agitation, there was little of relevance to Soviet ideology one could ascribe to the landscape patriotism of the early Russian travelogue. The class, not the nation, was now to be the uniting principle, and to emphasise the beauty of national landscapes would have been a counterproductive approach (Ibid.: 23).

Fig. 4.5 Cyborgs through dissolves in *Stride, Soviet!*

The film and cultural studies scholar Oksana Sarkisova carried out research for her groundbreaking article "Across One Sixth of the World" in the archive of the Russian Federation (GARF) and came to the conclusion that of the 134 films distributed by Gosfil'm in 1922, only 30 could be categorised as belonging to the travel film genre. Due to the lack of educational effect of this genre, the young Soviet film production concentrated on short agitation (agitki) and documentary films, which dealt, for example, with instructions for hygiene, the correct use of agricultural and industrial equipment or even just the right way to cross the street (Wurm 2007: 113).

It was not till the middle of the 1920s that the individual nationalities within the great realm once more became the focus of the Soviet film-makers, although it was not simple to harmonise the natural diversity with the demand for a unified Communist culture:

> Indeed, it was not easy to combine the depiction of cultural variety with the advancement of a universal Communist culture. The first rounds of discussion concentrated on "adequacy" and "anti-exoticism" in Soviet cinema. Yet showing the East without embellishment proved to be a difficult task. Filmmakers working on national material were often not familiar with the cultures they were filming, and their films received legitimate criticism. (Sarkisova 2007: 25)

Sarkisova here also follows Vertov's personal references to changes of scene, beginning with the move from his hometown of Białystok to St. Petersburg and the subsequent travel in the agit-trains. The author goes on to explain the structural and conceptual innovations Vertov introduced to the travel film genre. *A Sixth Part of the World* was a film commissioned by the state trade organisation (Gostorg), and in utilising the *kinoglaz* concept, Vertov returned to models and ideas he had already hinted at 2 years earlier in *Kinopravda No. 19* (1923, Dziga Vertov). Instead of a clear display of the extensive trade network and the complex procedures involved, from the production of varied goods for trade, through Gostorg's collection points and up to the delivery to consumers abroad, Vertov chose the form of a lyrical film. It was not the official sponsor who was being primarily promoted; rather the film-maker gives the central position to an affectionate look at the variety of the regions and countries of the Soviet Union and their inhabitants. In her article, Sarkisova argues that in his films Vertov was trying not to squeeze the whole country into a harmonious overall picture, but to offer, through the heterogeneous content of the film, an important alternative to an "affirmative, absolute answer".

Available Film Prints

According to the *Repertuarnyj ukazatel' kinorepertuar* (1931: 73), the film was originally 1767 metres long (six reels). Other sources (Tode), however, mention 1776 metres, which may be due to a transposition of digits (Tode and Gramatke 2000: 225). Tsivian lists the length of the film as 1718 metres (six reels). The print preserved at GFF/Austrian Film Museum is 1513 metres long (six reels), and the one available at RGAKFD measures 1511 metres. Despite what at first sight seems

to be an almost identical length for the two available prints, a viewing in June 2010 at RGAKFD established that there were significant differences in content to the GFF/Austrian Film Museum print. The RGAKFD print contains additional material in the third, fifth and sixth reels, including additional intertitles that are not present in the GFF/Austrian Film Museum print. Before the title "we are constructing socialism", a man with a braid has been inserted and before the title "together with the middle and poor farmers who are giving their bread for the cooperative", a weir. The weir as a mark for the transition from one editing unit to the next (an episode, in Vertov's terminology) has a special position in Vertov's films. Additionally, before the title "together with the farmers who are receiving a tractor from the cooperative", one sees a cart being driven and wheat being delivered; subsequently an additional shot of a tractor before the title "for the cooperative working of the land" has been edited in. Apart from that, in the third reel, shots of animals showing goats, bears, sables and camels, which are also seen in close-ups, have been inserted, as well as additional market scenes and rural scenes of farmers threshing. This matches frame enlargements from the Austrian Film Museum's Vertov collection, which could previously not be assigned to the film. In the fifth reel, several shorter scenes have also been added.

The most striking differences, however, are to be found at the end of the film, in the form of a (silent) speech by Stalin, which is cut in alternating with other shots. The poor quality of the material permits one to conclude that just one short shot was duplicated several times and edited in. At the same time, Vertov updated the film with current achievements of the Soviet Union in the 1930s. Although the shots of Stalin were removed again, probably in the 1960s, the Soviet industrial climaxes remained in the film. Tsivian also illustrates his text from frame enlargements apparently taken from the RGAKFD print, as they show Stalin in *A Sixth Part of the World* (Tsivian 2004a: 251). The RGAKFD also dates this print as being from 1926 and there is no information available regarding re-editing.

What is certain is that these additional titles do not appear in a list of intertitles from 1926.[13] One may therefore assume that the shots of Stalin were only inserted after 1926 and were probably removed again by Gosfil'mofond in the 1960s. On the other, there is a clue from 1926: in a musical script, shots of Stalin are mentioned;[14] it is, however, possible that the dating is not precise; documents in the Vertov collection sometimes contain handwritten dates which are not necessarily all correct.

A little more trustworthy is the mention of Stalin that appears in an article from 15 January 1927 which even hints at a curious lack of context. Comrade Stalin's speech about industrialisation at the end of the film has no logical connection to the previous material (Borisov 1927). In a speech in January 1927, Vertov himself spoke of changes that had had to be made for a rerelease and expressed himself in critical terms:

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[13] Archival document with signature V 064, held in the Collection Dziga Vertov at the Austrian Film Museum.

[14] Archival document with signature V 065, held in the Collection Dziga Vertov at the Austrian Film Museum.

> The film has already been shown in a changed form and, in my opinion, in a form that is definitely weaker. The changes affect mainly the sixth part, which has been lengthened by one and a half times, thus weakening the end. Those comrades who have seen the film at a screening in the Malaja Dmitrovka should note the changes. (Vertov 2008b [1926a]: 122)

Whether "they" were the sponsor, Gostorg, or whether political pressure was brought to bear from another side remains unclear. The discussion about *A Sixth Part of the World* is marked by claims of plagiarism from several parties. The use of "foreign" material was connected largely to the general shortage of film stock in the Soviet Union in the 1920s, which moved the directors, among other things, to be creative with footage that had already been shot (Žemčužnyj 1926: 16). In 1927 a dispute raged about the use of documentary material. The critic Ippolit Sokolov attacked Vertov and accused him of having used footage belonging to his colleagues, above all from the films of Nikolaj Lebedev (Sokolov 1927). Supposedly, between 30% and 40% of the film had been assembled using excerpts from various films (Borisov 1927). This controversy was carried on in the pages of the journal *Kinofront*. Both Vertov and Lebedev took part, as well as Sokolov (Tsivian 2004a: 233–246). The subject seems to have been of general interest and was also dealt with outside film circles. Even Walter Benjamin mentions in his diary that he was unable to acquire still photographs from *A Sixth Part of the World*, as Vertov was known to have incorporated material into his film that had originated in German industrial films:

> I had just hit upon the unhappy idea of acquiring stills from One-Sixth of the World from Gosfilm and I conveyed this request to Pansky. Whereupon he began feeding me the most abstruse line: the film was not to be mentioned abroad, its footage contained clips from foreign films, their precise provenance was not even clear, and complications were to be feared - in short, he was making an enormous issue out of it. (Benjamin 1985 [1927]: 104)

Benjamin had seen the film in the cinema in Moscow; he admitted, however, to not having understood everything, as he wrote on 6 January 1927 in his diary about his visit to the cinema: "I went to see One-Sixth of the World (at the Arbat cinema). But there was much that escaped me" (Ibid.).

A reading of the press responses leaves a rather ambiguous impression, for while Vertov was sensitive in his reactions to (re)use of material from his films, he seems to have had few scruples in helping himself to the material of others. In principle, one could see the practice of an exchange of material as the concrete fulfilment of Vertov's concept of the creative laboratory, in which different film-makers fall back on a common filmotheque, or *kinotheka*. Presumably only under the restrictive condition that it would be reserved for those directors who work according to the *kino-glaz* concept. Vertov also "quoted" himself in *A Sixth Part of the World*, choosing shots that had already seen use in *Kinopravda No. 22* (1925, Dziga Vertov).

Critical Reception in the 1920s/1930s

Apart from the enthusiastic welcome of the film as a window into another world (Urazov 1926a), the question of its genre was central to its contemporary reception. Was Vertov's film then a newsreel or a "scenic film"? The critic Vitalij Žemčužnyj formulated a possible answer as follows: "But one must admit that One-Sixth of the World cannot be placed in any of the usual categories and that the work of the 'kinoki' has introduced a new 'type' of film, a film in which the newsreel material is treated with a special editing method"(Žemčužnyj 1926: 16).

His colleague Aleksandr Fevral'skij, on the other hand, emphasised the film's musical components. The entire work was constructed like a musical piece with a contrapuntal structure, with recurring motifs, and among them "crescendos" and "diminuendos", "prestos" and "lentos". It is a genuine symphony of cinema (Fevral'skij 1926). Grigorij Boltjanskij, too, did not designate Vertov's work as a newsreel, but as a poem with Vertov as the poet (Boltjanskij 1926). It is noted that Vertov used archival material, according to Žemčužnyj not even enough, which was the proof that insufficient stock footage was available for a factographic film made according to the kinoglaz concept. At the end of his article, he called for the founding of a newsreel archive (Žemčužnyj 1926: 16).

More critical voices charged the director with lyrical aestheticism. It was also unclear exactly what the filmed situations were about (Beskin 1926). Even, for example, when one saw a vehicle for transportation, the contents could not be seen, and the public, not knowing which goods were involved, had to imagine them (Aseev 1926). The material used was randomly edited together, there was superordinate unity and the feverish, disruptive montage confused the viewers with the disarray it brought. Vertov throws images of Samoyeds together with a pianist's hand, a dancer's legs and many other things simply piled one on top of another (Gr. 1927).[15] Such allegations accompanied Vertov throughout his film career.

The film criticism was once more directed in principle against the putative inconsistency of Vertov's work. The director deformed facts and mixed the methods of the artistic and scientific film, as well as the fantastic with the real. Even if one were to hold it against him that some scenes were staged and that the director does not even follow his own programme, Vertov may still be encouraged to further efforts, wrote one of the authors, striking conciliatory notes at the end of his article (Sokolov 1927: 12). In his following films, Vertov preferred not to incorporate archive material and on *The Eleventh Year* and *Man with a Movie Camera* worked closely with his brother Michail, a talented cameraman. Several different cameramen were employed for *Enthusiasm* and *Three Songs of Lenin*, as the brothers had quarrelled and separated after *The Eleventh Year*; the newsreel archive was also used extensively.

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[15] *Samodijcy* or *Samoedy* (the Samoyed peoples) is a collective term for peoples who live(d) in parts of central and southern Siberia and use the Samoyed language.

The conflict regarding Vertov's dishonourable dismissal from Sovkino, till then his production company, following *A Sixth Part of the World* inflamed the passions of all concerned. The accusations and opinions to the contrary were, above all, aired in the press. Leading the charge was Il'ja Trajnin, the deputy director of Sovkino and a member of its board, who accused Vertov, among other things, of having gone wildly over the budget assigned for *A Sixth Part of the World*. The director at the time was the party functionary Konstantin Švedčikov, who was the chairman of Sovkino's board from 1926 to 1929 and responsible for the Soviet film industry. The reason could be found mainly in the way Vertov normally proceeded, that is, without a proper screenplay. It was therefore no wonder that the director could not punctually meet Sovkino's demand to submit one for his planned project *Man with a Movie Camera*.[16] On 13 September 1926, Vertov was publicly attacked for the first time and defended himself with a letter to the editor of Pravda. Friends and colleagues supported the indignant director in an open letter which, however, was never published, as the newspaper did not wish to become embroiled in concrete administrative conflicts. The signatories, among them Michail Kol'cov, Boltjanskij, Fevral'skij, Chersonskij and Vsevolod Mejerchol'd, argued that the charges were also directed against the entire format of the newsreel:

> In the story of the battle against Comrade Vertov there is everything, beginning with him for years being refused access to the workrooms at Sovkino because of an alleged "risk of fire" and ending with the false explanations publicly given by responsible colleagues of Sovkino and "surprises" such as suddenly suggesting to him he should just drop everything, leave Moscow immediately and go on vacation. In our view, the battle being waged against Comrade Vertov has two sides: the first consists of the battle against the entire Soviet newsreel, of which Comrade Vertov is the master; the second side consists of the battle against Vertov himself, and this side is totally devoid of any basis in fact.[17]

In this document, it is already hinted at that Vertov intended to shoot a film about the tenth anniversary of the October Revolution, which he would ultimately realise for the All-Ukrainian Photo Cinema Administration (VUFKU) in Kiev. After Vertov was given his notice on 31 December 1926, he and Sovkino had their exchange in the press from the 14th to 19th of January 1927, but the director was unsuccessful and had to leave Moscow. In the course of the discussion, some serious accusations were brought up: Vertov had been cavalier about the financial and content requirements of his production company, which had a commitment to the market. His cooperation in terms of content was also deemed inadequate. For example, he had not suggested any preventive measures to solve the problem of future plagiarism, which he himself had already repeatedly brought up during 1926. Far more serious, however, was the lack of a finance plan, which explained the explosion in costs (from a planned 30,000 roubles to 130,000 roubles). As the director had refused to

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[16] Archival document written by Dziga Vertov with signature V 067, held in the Collection Dziga Vertov at the Austrian Film Museum.

[17] Archival document written by Dziga Vertov with signature Pr USS 272, held in the Collection Dziga Vertov at the Austrian Film Museum. This is the English translation of a Russian document. Subsequently published in Zorič, A., Vl. Sarab'janov, M. Kol'cov, V. Dubovskoj, A. Zuev. 1965 [1927]. Pis'mo v redakciju. *Iskusstvo kino* 12: 68–69.

work to a plan, it had been necessary to dismiss him, as an article with the title "Počemu Dziga Vertov uvolen iz Sovkino" shows (1927). Vertov's defence against the latter charge makes interesting reading:

> The sum of 130,000 roubles (according to Sovkino's estimate) or one half of that sum (according to Gostorg's estimate) should have been divided into six parts, according to the number of shots that were photographed for the following films: One-Sixth of the Earth, The Man With the Camera and four short films. For the film One-Sixth of the World, then, correctly calculated, one comes to 20-25,000 roubles. (Vertov 2008c [1926b]: 122)

The question of which four short films Vertov refers to here remains open. In any case, he claimed that his first test films had been taken away from him when they came back from the laboratory: "I am also now protesting against the apparent confiscation of the materials for the film The Man With the Camera and other uncompleted works" (Ibid.).

Formal Characteristics of the Film

In this film approximately one-third of all shots are intertitles, which is the highest proportion for any of Vertov's feature-length films. Although there are several interesting multiple exposures and dissolves – those, for example, that depict the simultaneity of the new with the old as it replaces it – the other shot types within the formal analysis are rather negligible. Alongside missing frames and film damage, a total of four cue marks and four reel changes were annotated. Of the 34 shots containing text, only one was superimposed text; all the rest make use of diegetic text. Nine shots in *A Sixth Part of the World* had already appeared in *Stride, Soviet!*, while one further shot would later be reused in *Man with a Movie Camera*. Particularly noteworthy is one shot in which a stuffed wolf is filmed (Fig. 4.6). Tsivian has also remarked upon the subject as a "visual pun": "The enraged wolf from A Sixth of the World which a Nepwoman is shown cautiously fondling is stuffed. Suspended class struggle, or just an innocuous film attraction? Vertov was fond of images frozen in mid-movement" (Tsivian 2004a: 245).

For this film, too, Vertov helped himself to material from other documentary films. Among others, Nikolaj Lebedev was a concrete source of borrowings; Vertov used footage from Germany that came from the documentary film ACROSS EUROPE (1925). In later films, too, Vertov edited in excerpts from films by colleagues, such as shots from the film *Two Oceans* (1933, Vladimir Šnejderov), which appeared in the sound version of *Three Songs of Lenin* (1938). Of visual note in *A Sixth Part of the World* is the relatively large number of shots with unusual camera angles. Thus, for example, there are 11 aerial shots. In contrast to the earlier film *Stride, Soviet!*, masks are more frequently deployed, also in 11 shots. They serve mainly to guide the audience's gaze, to act like a telescope looking into distant lands. Several masks are also used in a technically refined manner for multiple exposures and lead to surprising effects. Several examples are presented in Fig. 4.7.

Fig. 4.6 A stuffed wolf as a symbol of the tamed NEP citizen?

Fig. 4.7 Camera masks in *A Sixth Part of the World*

Both the frequent shots filmed from an airplane and the adventurous use of camera masks may have been the result of intensive collaboration with Michail Kaufman as head cinematographer. While working as a newsreel cameraman, he had also been trained in aerial cinematography. Vertov also made conspicuously frequent use of travelling shots, including 14 times either from left to right or the reverse and no less than 41 shots travelling either forwards or backwards. These long camera movements appear primarily either in scenes shot in the north or in a snowy landscape. They are also effective because the movement on a sled in the tundra is generally more peaceful and unperturbed than if Vertov had filmed on a busy street – which he also did a great deal.

The preponderance of intertitles may be seen as the film's dominant. In *A Sixth Part of the World*, their visual effect is one of appeal and in consequence the function of integrating the public. To the public, they function less as explanations of content than as direct addresses. The titles emphasise a first person plural feel for the Soviet people, an artistic device which strengthens the overall concept of the film in the service of the trade organisation. The barter and transportation of goods is more than just a provision of services and the economy; in *A Sixth Part of the World*, they are a means of communication and exchange. Without the poetic lines

of text, the images would have no overarching idea and could at most be a kul'turnyj fil'm (cultural film), presenting the country and its inhabitants (above all the citizens of Moscow and Leningrad).

The Eleventh Year: Currents of Energy with Voids

The film *The Eleventh Year* was produced by VUFKU, which in the Soviet Union of the late 1920s was a successful and economically stable company. The greater artistic freedom of the Ukrainian studio was also a reason for Russian artists to seek their fortunes there, as the film historian Bohdan Y. Nebesio writes:

> The Futurist connection was also behind Dziga Vertov's transfer to VUFKU after his expulsion from Sovkino in 1926. Unlike their Russian counterparts, Ukrainian Futurists enjoyed creative freedom for a longer period because the so-called "proletarian" artists were much weaker in Ukraine and the attacks on the modernists started much later. Vertov was fortunate to arrive at VUFKU during the studio's most creative phase, and he was able to make his most innovative works, Odnatsiatyi (The Eleventh Year, 1928) and Liudyna z kino-aparatom (The Man with a Movie Camera, 1929). (Nebesio 2009: 172)

Away from the big film studios, Vertov had been able to shoot new material for several planned films and had apparently continued to develop technically in the process. *The Eleventh Year* is a playful film, in which the *kinoki* experiment with horizontal multiple exposures and established new editing procedures: "The film was edited and, with the aid of technician I. Kotel'nikov, augmented by a large number of superimpositions and other 'complex shots' between mid-November and late December 1927" (MacKay 2007a: 44). Some of it could be interpreted as a preliminary study for *Man with a Movie Camera*, on which Vertov had already begun to work in 1927, according to the Vertov specialist John MacKay, who has researched the filming of *The Eleventh Year*, as well as the director's plans for *Man with a Movie Camera* with great precision.

The Eleventh Year is a film that functions by means of movement, exchanges of movement and the transmission of movement; one could even describe it as "energetic montage". It can take place through the continuation of a gesture, a mechanical process or a camera movement, in a way that Vertov had perhaps not previously used experimentally. "A distinctive feature of much of The Eleventh Year as a text lies in the incessant way the editing is deployed to indicate, but also seemingly forecast, the circulation of energy from one place and form to another. I am tempted to coin a phrase and call this practice 'energetic montage', so focused is it on representing the traces of energy in exchange" (Ibid.: 65).

Vertov also sought to use music to emphasise this exchange of energy. *The Eleventh Year* is one of three films for which the current state of research has provided documents giving information as to the contemporary musical accompaniment. The only other films for which musical suggestions are available are *A Sixth Part of the World* and *Man with a Movie Camera*. The accompanying music anticipated by Vertov consisted mainly of classical works, for example, pieces from

Richard Wagner's opera *The Flying Dutchman*, or compositions by Petr Tschaikowski, but also including noises or avant-garde inserts. At the end of the first reel of *The Eleventh Year*, one can read: "Attention: in the event that 'Storm' is not available, replace with a stormy piece that should illustrate explosions, frights, fire. Repeat and *crescendo* till the end of the first reel" (Vertov ca. 1927: 121). At another point Vertov specifies that the clatter of the machines must be introduced without fail (ibid.: 122). The director explicitly insists on stormy playing, till the orchestra ultimately plays the entire ending at a furious tempo. The most important parts in the final, according to Vertov, are thus to be taken by the brass and percussion (ibid.).

Visually rhythmic hammering, effectively subdivided into single shots, was first used by Vertov in *Stride, Soviet!*, and he makes use of it once more in *The Eleventh Year*. This motif and the play with flowing, glowing metal are later further and more experimentally developed by Vertov in *Enthusiasm*, as is the theme of underground mining and processing of the rock with drills and milling machines. In *The Eleventh Year*, rollers, flywheels and gigantic cranes first appeared as the main actors, apparently turning and advancing without human intervention. The people, the workers and the inhabitants of the village are passively moved up and down in lifts, but they also actively control mighty equipment such as tractors and steam shovels. Movement impulses are carried forward from one shot into its successor, either by another protagonist or by a precisely choreographed pan of the camera. The camera is thus a component of this vivified, electrified world; it actively steers towards buildings and drives along landscapes – with the assistance of dissolves and travelling shots even the Kremlin wall appears to advance. When everything has finally accelerated to the climax, the grand finale, the film suddenly comes to a halt.

In a formal sense, the film is not as unambiguously broken down into relatively clear, demarcated sections as other Vertov works; many shots remain somewhat puzzling in their position within the work as a whole, such as a camel driver or a skeleton linked to the Scythian myth. That the last reel of the film is missing is verifiable. It seems that within the film, too, parts have been moved and others subsequently inserted, such as the marching soldiers at the end of the film. One of the Austrian Film Museum's founders, Peter Konlechner, reported on a conversation with Svilova that apparently took place during a visit to Vienna in 1970: "When Svilova was with us she saw things of Vertov's and only laughed at our print of Odinnadcatyj (The Eleventh Year) – in this print, which Gosfilmofond distributes all over the world – she said the end is in the middle and parts in there that don't belong at all" (Lant 2006).

One could sum up by saying that with the help of camera and editing, Vertov filmed impacts and waves of energy and to that end used above all flowing water as well as human and mechanical movement in his visual language. The interest in this subject and in the form of its visual implementation is grounded in the director's biography, for between 1914 and 1916, Vertov, as a student at the Psychoneurological Institute in St. Petersburg, had learned about transcendental materialism (or energeticism) with Vladimir Bechterev (MacKay 2007a: 52). MacKay is convinced that the director's preference for the organisation of work and dynamics can be at least partly traced back to the influence of Bechterev, as well as to the Italian futurists.

Vertov worked through these ideas, according to MacKay, in at least three films: "As far as the films themselves go, in at least three of them – One Sixth of the World, The Eleventh Year, and Man with a Movie Camera – processes of energy conversion, with human labor as a central relay point, provide crucial representational pretexts for the films' rhetoric, in whole or in part" (Ibid.: 58). In my opinion, one could replace *A Sixth Part of the World* in this listing with *Enthusiasm*, as the process of energy transformation is there more prominently visualised.

Even if MacKay emphasises mainly the flows of energy, there are certain points in *The Eleventh Year* which also reveal, both formally and semantically, braking and feedback. These switching points do not lead in a linear fashion from one subject to the next, but circle both the transition point and both narrative strands. One could almost speak of previews and flashbacks, like a zipper system of thematic transitions in which the film discards one theme and flows into the next.

Available Film Prints

The original length of *The Eleventh Year* according to the *Repertuarnyj ukazatel' kinorepertuar* (1931: 60) was 1600 metres (five reels), a length also given by both Tsivian and Tode. According to other sources, the film had six reels, which cannot be confirmed by the film print (Tode, Gramatike 2000: 227). The Russian film historian Aleksandr Derjabin refers to further sources in which the length is given as 1418 metres (Derjabin and Heftberger 2009: 12). The GFF/Austrian Film Museum print, by contrast, measures 1229 metres, while the print preserved at the RGAKFD is only 1194 metres long. There are no definitive explanations of these extreme discrepancies in the lengths of the prints; to date no record has been found, either in the Russian press of the 1920s or in the Vertov Archive in Moscow, that mentions the preparation of another version of the film. One cannot exclude the possibility that some of the film material was lost when VUFKU sold parts of Vertov's film to Germany. A comparison of the intertitles in the available film print with a list of intertitles from 1928 in the Austrian Film Museum's Vertov collection reveals a few interesting discrepancies. According to this comparison, a total of seven titles, which were originally at the beginning and end of one of the reels, are missing from the film print. Censor cuts can under no circumstances account for the shorter footage measurements in extant prints of *The Eleventh Year*. For according to Derjabin, the film had already been taken out of distribution by the second half of 1931, which would also have obviated any need to create a newly edited version due to censorship restrictions. On the other hand, it is plausible that VUFKU might have used the material for various other purposes. Abram Room was able to use part of the original negative during 1929 and 1930 when he made his montage film *Five-Year-Plan* (1930). The hope that one might reconstruct missing sequences of Vertov's film from this source must, however, be disappointed, as *Five-Year-Plan* is, according to our current knowledge, not preserved in any archive. Vertov himself, in his article "March of the Radio Eye"

(1930: 14), wrote once more of plagiarism and listed the film titles for which, he was convinced, the directors had helped themselves to *The Eleventh Year*. Vertov writes:

> If we were to make the experiment, in Moscow or in Charkov, to show the following films on the same day (I name the titles from memory): Odwa, The Shadows of the Machines [sic!], An Exhibit from the Panoptikum, Documents of the Epoch, Paschkow's Five-Year Plan, Room's Five-Year Plan and The Eleventh, and watch all these films one after another, we would be convinced that The Eleventh, with its more or less comprehensive components, is contained in all these films. (Wertow 1967 [1930]: 93)

One can also not rule out that Vertov himself reused parts of the negative in the editing of *Man with a Movie Camera* (which he completed shortly after the premiere of *The Eleventh Year*), *Enthusiasm* or *Three Songs of Lenin*.

Critical Reception in the 1920s/1930s

Only a few of the voices are positive, such as that of Naum Kaufman (1928), who praised Vertov as an experimenter and judged his style to be exceptionally pure and terse. He was the bureau chairman of the Kinopečat' (film press) publishing house in Moscow. Konstantin Fel'dman, one of Vertov's faithful supporters, contrasted him with Walther Ruttmann, who for him was one of those who limited themselves to transferring the traditions of the theatre to the cinema. Vertov, on the other hand, had freed himself from the rigid dictates of Aristotelian poetics and was developing specifically filmic forms of expression, with the narrative unfolding along parallel threads and not according to the first premise (unity of action). Kaufman formulated it polemically: "It would be outspokenly stupid if, only out of courtesy to Aristotle, we were to reject the advantages that the film camera and editing give us: More to see, wider and deeper than simple human sight permits us. Fortunately, the kinoki are not like these filmic Archimedes who in life complain [...]: Stop – you're ruining my concept" (Feldman 2004 [1929]: 324).

The Eleventh Year vanished from the cinemas, as Svilova reported, after only a few closed screenings, although the film was very successful in Kiev. She therefore "insistently" demanded that the film immediately be shown in the Moscow cinemas (Svilova 2004 [1928]: 291). On 15 May 1928, this finally came to pass. In the Moscow press, the complaint was mainly that the film (especially the second half) was not logically constructed and was thus not comprehensible. Even the accomplished camerawork could not overcome the confusion in the editing and the motiveless transitions (Belsky 2004 [1928]: 298). As Jakov Bel'skij writes in the periodical *Kommunist* from 6 January 1928:

> But if there is a "but", it must refer to the muddled montage. The "Electrical Cooperative" and the smiling peasant woman come in for no reason. She smiles when the electrician climbs a post to fix the electricity supply, and she smiles in the same sequence, only a little more merrily, when Petrovsky and Kaganovich speak on a platform. (Ibid.)

Here the author is, however, in error, for though his observation that Vertov edited in the same faces again is correct, neither Petrovskij nor Kaganovič appears in the film print. One can only assume that both politicians were later removed. In a speech on 16 February 1928, Vertov answered critical questions posed to him about his new film. He was confronted with the impression that the first parts were better edited than the later ones. The director reacted by defending his policy of editing, which developed throughout the film from a simple logical pattern to a complex construction:

> The first part is obviously at a level which is easier for the public to understand; the fourth and fifth are constructed with greater complexity. They contain a more intense montage than the first two parts; they are at the forefront of the cinema's future more than part one and part two. I must say that the fourth and fifth reels have the same relationship to the first reel as a university has to a primary school. (Vertov 2008d [1928a]: 137)

The boundary between socialistically effective montage experiment and pure formalism is blurred for the critics, and so Vertov and his *kinoki* are repeatedly reprimanded for losing themselves in symbolism and cheap aesthetics. Vladimir Fefer, too, who was, after all, the chairman of Mežrabpomfil'm's press bureau, took the same line and complained that even poetry and musicality had gained entry to the newsreel. This, however, could not be permitted; rather the authors should be sober materialists, dialecticians and authentic contemporary people (Fefer 1928). The journalist L. Šatov, in the newspaper *Žizn' iskusstva* of 21 February 1928, expressed himself in still harsher terms. "By means of extremely complex montage and photographic tricks Vertov and his cameraman Kaufman achieve the demonstration on screen of almost absolutely non-objective, abstract movement 'in its pure form', which smells strongly of the idealistic, non-objective 'Constructivism'of the Western European Dadaist innovators and their ilk" (Shatov 2004 [1928]). Although the visual impression of quadruple exposures or reverse filming "cannot be gainsaid" and "are very pleasant, often externally stunning, effected with great 'taste' and skill", the critic doubts the value for viewers beyond spectacle for its own sake:

> For what reason do these utterly beautiful machines move, what is their purpose in Socialist industry? – this is not only not shown in the film, but is not even said in the intertitles. Surely it would have been possible to find less pointless forms for expressing the essence of the life caught "unawares" by Kino-Eye, the life of the only country in the world where Socialism is being constructed! (Ibid.)

Even Vertov's supporter and friend of long-standing Michail Kol'cov found the film's story too dry, as too few people were seen (Kol'cov 1928). Another critic complained that machines, rather than people, played the leading roles and contrasted Vertov's film with the film of the Revolution, *October* (1928, Sergej Eisenstein). There objects took the roles of actors and depicted the dying past as statues or monuments, whereas in *The Eleventh Year* the machines as actors defined the future. There was in general too much emphasis laid on the machines (D. 1928).

Vertov's work method was later sharply criticised in a newspaper article by Osip Brik, which Vertov held against him as an attempt to undermine his group through polemics. As others had done, Brik praised Kaufman's brilliant camerawork above all and found fault only with the director's work. Vertov had not only frivolously

rejected a script for the documentary film, but he had tried to replace it with inter-titles. The meaning of the shots should then be explained in words, but nothing coherent could emerge from that (Brik 1928). Brik maintained that it was necessary to establish a documentary film factory, for without such an institution Vertov would never free himself from his amateurism and develop his inherent potential (ibid.).

The German press also had its say about the film. The "New Frankfurt" group that revolved around the Frankfurt city planners Ernst May and Sophie Küppers celebrated the film as a heroic document of labour and Vertov as the creator of a language that was 100% film (Küppers 1929). Since 1927 Sophie Küppers had been married to the Russian artist El Lissitzky. The couple were close friends of Vertov and helped organise his first tour of Germany, on which Vertov embarked in May 1929.

Formal Characteristics of the Film

A first glance will show the shift of the specially marked animation shots and simple dissolves used to multiple exposures and multi-images/split screens. In general, Vertov used only a very few techniques alongside standard shots and intertitles (which here also see their lowest absolute figure to date, making up only about 10%). From *The Eleventh Year* onwards, the director would remain faithful to multiple exposures, using them both regularly and often. The horizontal split screen images are the most inventive and visually impressive elements in this film, not infrequently causing disorientation for the viewer when the upper and lower parts of the image (bisecting the screen) feature movement in different directions. Alongside missing frames and film damage, a total of six cue marks and four reel changes are annotated. Of the 17 shots in which text appears, it is superimposed four times, with the remainder being diegetic text.

As already mentioned, at this time shooting was taking place simultaneously for the three "Ukrainian" Vertov films, *The Eleventh Year*, *Man with a Movie Camera* and *Enthusiasm*. Whole scenes can doubtless be discovered which were split up after shooting among the three films, for example, the footage of the underground mining in the Donbass region. It is difficult to isolate individual intertextual duplicates for these films, for although the images resemble each other, they are not completely identical. For example, shots showing the underground mining in *The Eleventh Year* reappear in the film *Man with a Movie Camera*, released a year later. In addition, two reused shots appear in all extant versions of *Three Songs of Lenin*: the iconic depiction of a wagon and a rocky landscape.

The travelling shots seem to have become established as a frequent procedure for Vertov and Kaufman over the course of time up to 1928; the camera moves either from left to right or vice versa a total of 29 times, and there are 49 instances of travelling shots either forwards or backwards. These travelling shots are frequently used in combination with technical infrastructure, such as along building sites. At another

point, the camera floats along the ceiling of a machinery room, allowing its dimensions to be experienced. Other forwards travelling shots take place in Soviet cities. The camera passes by famous squares and buildings, thus giving the events a geographic orientation. Backwards travelling shots – filmed, additionally, from a very low vantage point – often document marching people, with the low angle adding to the intensity.

As already noted, the film is set apart from other Vertov films by the unusual and inventive split screens, which give it its own flavour. My proposition that this procedure constitutes the film's dominant can be backed up in several ways. *The Eleventh Year* was a commissioned film for the 11th anniversary of the October Revolution and had the task of preaching its achievements, including the Soviet Union's electrification, which, incidentally, would also be splendidly depicted 2 years later by Kulešov in *Forty Hearts* (1930, Lev Kulešov). Horizontal partitioning of the screen, dubbed tiers of space by Tsivian (2004a: 312), visually express, on the one hand, the energetic lines and the flow of currents, for example, when the work vehicles and parades with people simultaneously move on three levels (Fig. 4.8, above).

On the other hand, the splitting of the screen seems to be a mode of attaining the effect that a subject can be shown simultaneously from several sides or from different distances. A mountain is prominently shown in this way, bearing, as a visual joke, first a gigantic worker and then two workers striking it with their hammers (Fig. 4.8, below).

One could interpret it as the Soviet might taking possession of nature and wresting electrical energy from it, forming the landscape and, where necessary, flooding villages – as narrated in the intertitles at the beginning. At the end, the flow of energy is in progress, multiplied in countless masses of people on the streets with banners. The other shot transitions also serve this superordinate idea, but it is with the multi-images/split screens shots that it is most clearly demonstrated.

Fig. 4.8 Multi-images/split screens in *The Eleventh Year*

Man with a Movie Camera: The Avant-Garde Experiment Without Intertitles

Man with a Movie Camera, from 1929, is without doubt the most famous and formally most accomplished of Vertov's films and was a cherished project of long standing for the director, who gathered material and made notes for it over the course of years. At what one could term the high point of his creative freedom, Vertov dared the experiment of creating a film completely devoid of intertitles and make himself understood to the public exclusively by means of his film language. The plan of making a film without intertitles is in complete accord with the artistic ideas of the Russian avant-garde. For the demand for pure arts, for the differentiation according to the features characteristic only of a single medium, belonged on the one hand to the rhetoric of the modern but can also be understood as an attempt to establish the cinema as a new art form (Manovich 1993). In his deliberations on "Photogénie" at the beginning of the 1920s, the director and film theorist Jean Epstein insisted: "For every art creates its own forbidden city, its own very own territory – exclusive, autonomous, specific and hostile to everything that does not belong there. Astonishing as it may sound, literature must first of all be literary; the theatre theatrical; painting painterly; and the cinema cinematographic" (Epstein 2008: 49). Vertov expressed himself in similar terms as early as 1922, when in his famous manifesto, "WE. Variant of a Manifesto", he polemically took on syncretism in the arts:

> We protest against that mixing of the arts which many call synthesis. The mixture of bad colors, even those ideally selected from the spectrum, produces not white but mud. Synthesis should come at the summit of each art's achievement and not before. We are cleansing kinochestvo [the film-thing, neologism by Vertov, A.H.] for foreign matter - of music, literature, and theater; we seek our own rhythm, one lifted from nowhere else, and we find it in the movements of things. (Vertov 1984a [1922]: 8)

Jurij Tynjanov expressed it still more pointedly in his influential essay "On the Foundations of Film":

> To name the film after neighbouring arts is just as unproductive as to define these arts according to the film: painting as "motionless film", music as "film of tones", literature as "film of the words". It is particularly dangerous when dealing with a new art. It here the expression of a reactionary Passéism – the endeavour to name a new phenomenon after the old. (Tynjanov 2005b [1927]: 61)

As the film scholar Herbert Eagle explains, certain structural principles from other types of art were seen as self-evidently relevant for the cinema, but "the attempt to borrow, in toto, stylistic systems characteristic of genres in other art forms was seen as mistaken" (Eagle 1981: 18). A few Russian formalists, as well as film-makers, such as Pudovkin, expressed themselves in concrete terms about the use of intertitles. Their basic attitude was by no means negative – text in film was seen as an important link between the pictorial elements, sometimes even as an organic component. Pudovkin thereby differentiated between explanatory titles and dialogue titles, which had in common that they should be clear, concise and suitable to the film's rhythm: "The explanatory title is only good when it unburdens the

script of superfluous material and explains the essentials briefly to the spectator and prepares him for a better understanding of the plot's continuation. An explanatory title should never be stronger than the plot which follows it" (Pudowkin 1961: 57). One should take the lead of the American film-makers: "They give all necessary explanations in the first reels and support the middle with more dialogue titles in order finally to lead the pure plot towards its end with increased tempo and without titles" (Ibid.: 60).

The most influential formalistic theoreticians, like Ėjchenbaum, Tynjanov and Jakobson, emphasised the function of the titles as an important artistic device. Ėjchenbaum devoted an essay to the subject in which he began by confirming that editing technique must have developed so far that intertitles were no longer necessary but that the art of the intertitle nonetheless had a great future. More precisely, its potential lays in its ability to guide the public's inner speech and influence reception, as it could thus believe it heard the actresses and actors speaking (Ėjchenbaum 2005 [1926]: 192). Tynjanov also pointed out that the cinema was an abstract medium, for in it experiments with time and space, as well as with the bodies of the actors, could be carried out. Words in film remained separated from their speakers, the meaning made abstract and separated from the act of speaking (Tynjanov 2005a [1924], 240). But only when the style of the title was in accord with the genre and style of the film could text and shot enter into a relationship and be seen as components of the montage. Ėjchenbaum, though, indicates an important problem (or potential): "How often and when may one include jargon, dialects and the like in the intertitles, or to what degree may one deviate from what the spectator regards as a linguistic norm?" (Ėjchenbaum 2005 [1926]: 192). Such language experiments did not, in fact, take place to any great degree, as attractively decorated and creatively designed title cards belonged, with few exceptions, as staple elements of silent cinema's filmic method. Films without explanatory intertitles were quite popular, for example, in the cinema of the Weimar Republic, among them *From Morning to Midnight* (1920, Karlheinz Martin) or *Warning Shadows* (1923, Arthur Robison). Friedrich Wilhelm Murnau, too, carried out a successful experiment in doing without title cards in *The Last Laugh* (1924, Friedrich Wilhelm Murnau).

The issue in Russia may have involved the fact that the struggle against illiteracy constituted an urgent problem and one wished to be sure that the public would grasp the statement made by a film. Film, in addition, had always understood itself as an international medium, in which the structure of distribution and the preparation of different language versions for release had an effect on the translation of titles. Wordplay would in any case be lost for export. In *Kino-Eye*, for example, Vertov imitated the typical accent of a Chinese magician in written form, by replacing the "r" in "smotri" ("look here") with an "l", so that in the intertitle one then reads "smotli". But even here the director had to provide an explanatory intertitle with the correct Russian word in order not to risk being misunderstood.

Man with a Movie Camera was Vertov's last silent film, just before the transition to sound in Russia at the beginning of the 1930s took place. Tynjanov and Jakobson expressed opposing positions to the replacement of intertitles by the soundtrack. Tynjanov's criticism may have been directed against the sound film in general but

can also be read as a criterion for the incorrect use of text in film: "The film thus also uses the words either as a motivation for the linking of the shots, or as an element which plays a – contrasting or illustrative – role as regards a certain shot; if one wished to fill a film up with words, a chaos of words would arise and nothing else" (Tynjanov 2005b [1927]: 59).

Jakobson, however, welcomed the replacement of intertitles and assigned the sound film the potential, finally, to take up elements of pure literary composition. For although he felt such attempts had already been made in the silent cinema, these, however, required "either simplified subjects or an excessive slowing down [...] Between the film of today that runs uninterrupted and the film which is interrupted by titles, the difference is essentially the same as between opera and vaudeville with singing. The rules of the purely filmic linking of shots will now have a monopoly" (Jakobson 2005 [1933]: 382).

In an exhaustive review of the film *Man with a Movie Camera*, Naum Kaufman attempted a kind of history of the development of Vertov's intertitles. Beginning with the *Kinopravdas*, a text construction had come in use in the mid/late 1920s that was easy for the public to pick up quickly. Aleksandr Rodčenko began to work with Vertov from *Kinopravda No. 7* (1922).[18] Up to this point, according to Kaufman, they had been only literary annotation. The aim was to enable the public to assimilate the intertitles as rapidly as possible, and it was always kept in mind that they should take up as little space as possible. This kind of intertitle could be termed "expressive" (Kaufman 1929: 12). Kaufman also provided insight into the way titles were produced and listed various types of design and the functions they possessed in Vertov's films. For so-called "luminous" intertitles, letters were cut out of black paper, pasted onto transparent paper and then lit from behind. Such experiments were also made using a reverse procedure, but were not deemed successful, as the eye's focus normally goes to lighter surfaces. The artists were inventive: moving, rotating titles, animated titles, even so-called "self-writing" titles, such as those that appear at the reel ends of *Kino-Eye*, also interrupted titles, into which shots were inserted. It was often a central concern to limit the amount of text seen as intertitles, and, in general, an effort was made to use images of documents, graphs or quotes. One example of that is the diary of a pioneer in *Kino-Eye*. Especially in this early film, Vertov is exceptionally playful and innovative, not only concerning the use of text but also in the linking of shots through different kinds of dissolves and masks within a single shot.

Considerable debate was unleashed by Vertov's eschewing of all intertitles in *Man with a Movie Camera*, apart from the following introductory titles:

1. The Man with the Camera. Film record in six reels. A production of VUFKU, 1929. (Extract from the diary of a cameraman).
2. For the attention of the public: This film is the attempt filmically to reproduce visual phenomena.
3. Without the assistance of intertitles (a film without intertitles).

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[18] More on the use of constructivist intertitles in Tsivian 2004a, Chap. 3.

4. 4.Without the assistance of a script (a film without a script).
5. Without the assistance of the theatre (a film without actors, sets, etc.).
6. This experimental work attempts to create an international, absolute language of cinema, based on the complete independence from the language of the theatre and of literature.
7. Author and director of the experiment: Dziga Vertov.
8. Chief cameraman: M. Kaufman.
9. Editing assistance: E. Svilova.[19]

Vertov's films had to that point been fully equipped with a great deal of text and had contributed to Vertov's reputation as an adherent of emotional intertitles, much to the film-maker's displeasure (Vertov 1984e [1928]: 84). Perhaps not entirely convincingly, the director defended himself by saying that this process must be understood as evolution in his films:

> Indeed, the kino-eye group, following its renunciation of the film studio, of actors, sets, and the script, fought for a decisive cleaning up of film-language, for its complete separation from the language of theater and literature. Thus, in *One sixth of the World* the titles are, as it were, factored out of the picture and isolated into a contrapuntally constructed word-radio-theme. "Very little room is devoted to titles in The Eleventh Year (their modest role is further expressed by the graphic execution of the titles), so that a title can be cut out without in any way disturbing the film's force." (Kinofront no.2, 1928). [...] Thus the complete absence of titles in The Man with a Movie Camera does not come as something unexpected, but has been prepared for by all the previous kino-eye experiments. (Ibid.)

As a concluding important point from a technical perspective, one must still mention that the intertitles, in particular, were subject to constant revision and adaptation by archive staff and film laboratories. The conventions of both spelling and aesthetics (e.g. the decision to use a more modern font) were subject to alterations over the course of time; in addition, prints for international distribution were in any case provided only with so-called flash titles, which functioned as placeholders for the titles in the languages of the respective countries. In Vertov's case, the current state of research has not identified any official foreign-language version of his films, but adaptation of the titles was routine, even though scarcely any records of this can now be located. The ability of a director to influence the length and design of the intertitles had, in principle, a time limit, due to the conditions of production and distribution.

Available Film Prints

The *Repertuarnyj ukazatel' kinorepertuar* (1931: 72) specifies an original length of 1839 metres (six reels), a length with which Tsivian also concurs. Against this, the GFF/Austrian Film Museum print that has come down to us is 1814 metres long, while the print available at RGAKFD measures 1784 metres. It is also known that

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[19] Opening titles of the film, Austrian Film Museum print.

the film was passed by the German censor on 21 June 1929 with a length of 1807.52 metres (Tode and Gramatke 2000: 227). A further important source is a contemporary 35 mm full-frame nitrate positive print, previously preserved in the archives of the Dutch Filmliga. This 35 mm nitrate print measures 1776 metres and the corresponding 16 mm reduction print has a length of 678 metres.

The 35 mm print is an important historical document, as it dates back to Vertov's second (and last) trip abroad through Europe from June to December 1931, which also took him to Amsterdam. Invited by the Filmliga, he arrived in Amsterdam on 10 December 1931, after previously having visited Rotterdam (Tode and Gramatke 2000). The Filmliga was a collective of film-makers and film lovers, which included Joris Ivens and which existed from 1927 to 1933. On this evening *Man with a Movie Camera* was presented with a full orchestra. In his luggage, the director had brought a print of his film, which he sold to the Filmliga after the performance – which was not unusual at the time, as the Soviet directors were required to help finance their trips abroad. This film print, which was made directly from the camera negative and is therefore of exceptionally good photographic quality, became the basis of the new restoration which the EYE Filmmuseum carried out in collaboration with the Austrian Film Museum in 2009/10.

The Amsterdam material differs significantly from all other extant prints in terms of its image format. As already mentioned, early copying of silent films often included the unfortunate error of using the printer with the narrower gate intended for sound films. In this way, silent films lost one-sixth of every frame – irretrievably, as for safety reasons, the nitrate originals were usually subsequently destroyed. As a result, for a long time, *Man with a Movie Camera* was known only in a "trimmed" version. Fortunately, the print preserved in the Netherlands survived untouched in its original full-frame version. One important scene, however, is missing in the Amsterdam print: the birth of a child, which the Dutch censor of the time found objectionable. For the restoration, this section was added from the material held by the Austrian Film Museum.

A further difference between the restored version and the prints previously known has to do with the structure of the film's action. Vertov divided the film into six reels, which he marked with animated silver numerals. At the beginning of each reel, the respective number uses a special effect to stand upright and folds back up in the opposite direction at the end of the reel. The end of the film had a similar design, with the word "End" being animated. Over the years, the numbers were removed from almost all prints, leaving the transitions between the reels seamless. These interventions may differ in their severity from print to print, though almost all prints lack the ascending and descending numbers other than the ascending "1". There are various reasons for this, one being that it was simply widespread archival practice to combine the originally 300-metre long film rolls (corresponding to the reels) into larger units of 600 metres each. This saved film cans and storage space. A further reason was that from approximately the mid-1930s, it became possible to screen films with change-over projectors (i.e. using two projectors). Longer reels meant less frequent changing of reels and thus less work for the projectionist. In the course of the restoration, which was completed and premiered in April 2010, the

original structure of *Man with a Movie Camera* and the animated reel numbers, as well the end title, were reconstructed. All material used was digitised in high resolution and supplemented with sections from the 16 mm acetate print, a reduction print of the film of uncertain age which is also held by the EYE Filmmuseum. Subsequently, a 35 mm print was struck from the negative.

As Seth Feldman also observed, the relatively small differences in length between the extant prints can with great confidence be traced back to the removal of the numbers at the beginnings and ends of reels and of the animated end title (Feldman 1979: 109). Prints treated in this manner are mainly in archives in the West and date from the 1950s and 1960s, when Gosfil'mofond was exchanging prints with, or selling them to, film archives all over the world. The interventions are therefore of differing degrees; sometimes all numbers are missing; in other prints some have remained, providing information about the original look and length of the original titles.

Critical Reception in the 1920s/1930s

On 9 April 1929, the film was shown for the first time in Moscow, 3 months after its general release in Kiev on 8 January 1929; it remained in the cinemas for 2 weeks and was very warmly received by the Russian public, which was reported by the newspapers (Fel'dman 1929a), although the distributor had previously been very wary (Včem že delo?!: 1929). Fel'dman praised Vertov in an extensive article, in which he elaborated on the relations of the arts to one another and quoted both local and foreign directors and artists. The critic presented Vertov as a model director who used the new medium energetically, innovatively and uncompromisingly (Fel'dman 1929b).

Chrisan Chersonskij, on the other hand, was very critical, conceding Vertov's talent but judging him to be a "childish artist", an artist from the childhood of Soviet cinema. He was still occupied mainly with demonstrations of daily life, such as the movement of horses and people, and did not yet know how one could expose and show the authentic and profound dialectic of social problems (Chersonskij 1929b: 5). According to Chersonskij, what was lacking above all was a conscious critical approach to socialist reality (Chersonskij 1929a). The journalist Vladimir Kiršon, at a meeting of the Association of Revolutionary Cinematographers (ARK),[20] granted that Vertov was an exceptional artist but added the criticism that his material represented only naked aestheticism, an appreciation of the material without social significance or psychical coordination (Vak-Zal: 1929). This was an association of theoreticians, critics and film-makers interested particularly in promoting the documentary film and the merging of science and film practice that was so central for Vertov. The ARK organised discussions and workshops. The directors had the

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[20]Associacija revoljucionnoj kinematografii, founded in 1924, then renamed in May 1929 to ARRK (Associacija rabotnikov revoljucionnoj kinematografii).

opportunity to justify their films (even being, in a sense, obligated to do so). Vertov had already joined in 1926 and was member number 50 (Hicks 2007: 62). The director was, however, rather critically inclined towards the documentary film, as Hicks describes. Chersonskij emphatically pointed out that although a film without title cards had been announced, the film, on the contrary, was rich in diegetic text. From this fact, the author took the opportunity to reflect on intertitles in general:

> When one studies music, it is useful to learn the scales. Exercises in film language without words are just as meaningless. If, however, one views Čelovek s kinoapparatom as a completed work of art it becomes obvious that the use of intertitles would have made the film more comprehensible, livelier, it would have a greater impression and have a greater effect on the viewers. (Chersonskij 1929a)

For Chersonskij, Vertov was, at best, contradicting himself when he maintained there had been no script, for a shooting plan must certainly have existed, which in his opinion corresponded to a script. One had only to differentiate as to when it came into being: before, after or during the shooting. The critic regrets that the content of the film was, in any event, insufficiently developed and conveys too little.

It is more than understandable that the critics fell on these contradictions and rightly pointed out that Vertov was doing himself no favours by vehemently rejecting conventional artistic procedures, although it was often difficult to determine where the boundaries lay. In Chersonskij's view Vertov was even an inadequate artist, a talented observer but one who needed a prudent organiser for his observations. It was precisely this conscious art, against which he struggled, that he lacked (Chersonskij 1929b: 5).

From May to August 1929, Vertov took his first trip abroad through Europe and toured with *Man with a Movie Camera* in Germany as well. To accompany his lecture "What is Kino Eye?", he showed excerpts from several other films, among them *The Eleventh Year* and *Kinopravda No. 21*. The German critics may be viewed as overwhelmingly positive, even though they included some critical voices. The result of the few negative reviews was that Vertov felt himself forced to make statements in newspapers and periodicals, talking about his artistic methods and how they enabled him to transcend space and time. Vertov argued that special effects photography was no breach of his documentary claims – on the contrary, it enabled a connection between film life and real life. Here Vertov also spoke of having shot *Man with a Movie Camera* in two variations, one in 1926 and the other in 1928, something which is not borne out by any film prints known to exist (Wertoff 1929).

The critics naturally discussed Vertov's film in the context of Walther Ruttmann's *Berlin: Symphony of a Great City* (1927), which some, e.g. in *Der Montag* (1929, found more successful, as it was more logically and succinctly conceived and had a higher documentary content, as has been pointed out by *B.Z. am Mittag* (1929).[21] Apart from that, compared to Ruttmann's film, Vertov's film was no longer anything new, said critics in *Vorwärts* (1929), and the Soviet propaganda it contained was unbearable, according to the *Berliner Herold* (1929). Siegfried Kracauer, then the

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[21] For a discussion of Vertov and Ruttmann in the eyes of the critics cf. Tsivian 2004a, chap. 29.

editor responsible for film at the *Frankfurter Zeitung* (1929), judged Ruttmann's filmic associations as purely formal, while there was a sense in which Vertov had gained through his reality-splintering editing. Paul Westheim,[22] too, wrote in similar vein in the *Acht Uhr Abendblatt* (1929) that Ruttmann had remained too bogged down in the thematics of machinery, whereas Vertov had actually succeeded in capturing reality. As an example, however, of Vertov's unsuccessful attempt to take a political position, the scene in the shooting gallery, in which a woman takes aim at swastikas, was singled out in *Die Deutsche Zeitung* (1929). The critics were also divided regarding the film's ideological content. Thus it was written by Durus in the left-wing journal *Rote Fahne* (1929) that the depiction of reality and the dictatorship of the proletariat had suffered, as the director was rapt in his machine aesthetics and applied his gaze above all to the artistic elements.

As in other Vertov films, the formal experiments were judged as a purely optical gimmick, the film was called "a lesson about the hardships of a cameraman" in the *Welt am Montag* (1929) but otherwise a trial for the viewers. A further, very critical, article began with the statement that not even Vertov could save silent film anymore by losing himself in technical gimmickry. His tricks were indiscriminately cut in, and the fragments meaninglessly and embarrassingly diverged from one another, wrote the *Berliner Tageblatt* (1929). Even if the film was interesting, according to the publication *Die Film-Illustrierte* (1929), it was too long (which was a frequent complaint) and needed to be cut by a third, apart from which the end of the film was too hurried and confusing. Documentary film pioneer John Grierson (2004 [1931]: 375) called the film a "snapshot album" in 1931, lacking in plot and dramaturgic structure.

The film was nonetheless overwhelmingly deemed to be interesting and beautiful; it was not the sober reportage as which it was being promoted, but as Manfred Georg (1929) wrote "the highest in artful and artistically felt photomontage the author has encountered thus far". In contrast to Ruttmann, who was a serious observer, in Vertov's film the cameraman himself as an "amusing juggler stood with the features in the foreground" (in *Vorwärts* 1929), and the technical level was throughout exceptionally high, even brilliant, and the events were captured in masterful images, agreed critics in *Der Deutsche* (1929) and A. Kossowsky and Kurt London in *Der Film* (1929). The way that Vertov was able to make time stand still was, above all, impressive, wrote the *Acht-Uhr-Abendblatt* (1929). There was, however, ambivalence regarding the musical accompaniment for the performance in Berlin, which was, after all, in the hands of the prestigious silent film accompanist and composer Werner Schmidt-Boelcke: the spectrum went from "sensational" in the *Licht-Bild-Bühne* (1929) through "unusually good" in *Berlin am Morgen* (1929) to the statement that the musician was not equal to his assignment (Kossowsky and London 1929).

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[22] Paul Westheim was a German-Jewish writer on art, an editor and a critic. He penned many fundamental monographs on the modern art of the twentieth century and was especially active in promoting recognition for German expressionism.

Formal Characteristics of the Film

The proportion of 91% standard shots is without question curious. *Man with a Movie Camera* is, after all, considered an avant-garde masterpiece. In the formal analysis, it becomes clear that the experimentation shows up not just in the design of shots, but far more in other ways, such as the editing and the camera movement. We nonetheless find animation of objects in 25 shots and many double exposures, split screens and dissolves. Alongside missing frames and film damage, a total of 19 cue marks and five reel changes are annotated.

Although Vertov programmatically used no intertitles, it is still a silent film that is very "rich in words", with diegetic text showing up in 105 shots. Tsivian humorously comments on this fact: "That Man with a Movie Camera tells its story unaided by intertitles does not mean that our reading eye is left without work. Posters and street signs shout at us from almost every corner. Smaller inscriptions of different varieties – documents, instructions, or epitaphs – swarm Man with a Movie Camera like so many buzzing insects" (Tsivian 2004b: 16).

Two shots from *Man with a Movie Camera* were each already used in *Kino-Eye* (the view of Tverskaja Street) and *A Sixth Part of the World* (the stuffed dog). Here, however, they are used in different contexts. This is also true of the previously mentioned four shots from *The Eleventh Year* (flywheels and underground mining). In addition, four shots from *Man with a Movie Camera* are later used in *Enthusiasm*: underground miners in various shots and the transport of coal on conveyor belts.

The annotation of the film is very labour-intensive, due to the frequent and complex movements of both camera and objects. Travelling shots are frequent throughout, as are pans, and the handheld camera is not used more often in any other film. In concert with the rapid cutting rhythm, the result is an exceptionally eventful film. Vertov goes still further by combining effects of shooting rate and projection rate, time lapse and slow motion photography together with other processes.

I propose that the film's dominant is to be found not in its formal design, but in the central idea of self-reflexivity. In every other film, the processes underpin a socio-political idea: the Soviet infrastructure or leading personalities, i.e. propaganda in the narrow sense of the word. Here, however, Vertov and his film crew are concerned with the art and pleasure of making films. Nowhere else are Kaufman and Svilova brought into focus and their abilities so comprehensively and affectionately presented.

Enthusiasm: The Laboratory of Hearing

The change from silent film to sound film took longer in the Soviet Union than in most countries, and the replacement of one by the other was in no sense sudden. The British film *Cottage on Dartmoor* (1929, Anthony Asquith) gives a good impression of the atmosphere of the period. Strongly influenced, in a formal sense,

by the Russian school of editing, it contains a self-reflexive processing of the arrival of the sound film, despite the tale of crime with which the plot deals. In an interesting sub-plot taking place in a cinema, a small orchestra still accompanies the supposing programme and then has a break, which is used for comic relief. The memory of *Man with a Movie Camera* is irresistible, but in the British film, it is ironically alienated. Film historian Ian Christie's article "Making Sense of Early Soviet Sound" constitutes, in this context, an indispensable contribution to the analysis of the Soviet Union's first sound films. The genesis of the first sound films is described, and Christie concretely depicts the reservations of the formalists (especially Ėjchenbaum). In addition, for years both projection systems were used in parallel: "Even when production was under way, sound and silent cinema continued to coexist for nearly 6 years – a length of transition exceeded only in Japan" (Christie 1991: 177).

The representatives of the avant-garde responded promptly to the new technology and on 5 August 1928 published a joint statement on the sound film. There they expressed their concern that in future sound would be deployed only as an attraction or, just as uninspiringly, that the relationships between the visual and acoustic levels would be limited only to synchronising image and sound. By contrast, contrapuntal editing could create new and unimagined possibilities and further develop the achievements of the Russian montage cinema to date: "Sound, treated as a new element of montage (as an independent variable combined with the visual image), cannot fail to provide new and enormously powerful means to expressing and resolving the most complex problems [of theme and plot], which have been depressing us with their insurmountability through the imperfect methods of a cinema operating only in visual images" (Eisenstein et al. 1988 [1928]: 234).

Vsevolod Pudovkin is known to have experimented with asynchronous editing of sound, for example, in *Deserter* (1933), and expressed himself several times on the possible correspondence of image and sound (Pudovkin 1988 [1929]: 280). Šub, too, had positive words for the further technical development of the cinema: "For those of us in non-played cinema the most important thing is to learn to record sound, tone, voice, noise, etc., authentically, with the same utmost expressiveness with which we have learned to record authentic, unstaged, real nature" (Shub 1988 [1929]: 271). Vertov shared this attitude, having conducted experiments with sound in his youth and continued them in 1916 while studying with Bechterev at the St. Petersburg Psychoneurological Institute. His Laboratory of Hearing (laboratorija slucha) was described by the director as "a montage of sounds, words, solitary fragments and stenographs, executing an audible unity" (Vertov 2006 [1947]: 132). He was continually occupied with sound, during the silent film era, as well:

108. The pre-cinematic experiments of the Laboratory of Hearing, which Vertov "betrayed" in 1917 with a shift to the documentary "I see", were not entirely discontinued with the development of the silent documentary film. They appear, time and again, in "eruptions" of musical montage, as rhythmical word themes, or in the form of a "song without words", as a visual projection of a poetic idea, as an announcement in the realm of Radioglaz. (Ibid.: 139)

Vertov carried out his first serious attempts at sound on film in March, 1930, shortly afterwards the beginning of production on *Enthusiasm* was approved and the film crew travelled to the Ukrainian Donbass region. These first experiments are in accord with the director's *kinoglaz* theory and are unfortunately only preserved, according to our current knowledge, in Vertov's written notes and not as sound records:

> 105. The first practical experiments in the realm of synchronous filmmaking. First experiments in the realm of the remote control of cameras. Sound recording using the telephone. Image-Sound-recording using the telephone (Film using on location, sound recording device at a significant distance, synchronization by means of a direct line). Experimental attempt to record using the radio. "Surprise" sound recording. Hidden "sound recording". Initial experiments with the hearing of tones. Experiment over two days of aural observation. (Ibid.: 136)

After weeks of hard preparatory work by the group around Professor Šorin, one of the Soviet Union's sound film pioneers, the shooting in the middle of April 1930 made further extreme physical and mental demands on Vertov's crew: "Faced with the deadline of a month, we went to 'storm' the sounds of the Donbas. Faced with the complete absence of means of transport, we walked, dragged, as we went, a twenty-seven-hundred-pound[23] load. Crawled on all fours to 'the sticks'" (Vertov 1984i [1931]: 108). The lack of experience with the new technology made complicated procedures necessary during the shooting and later on during the editing (ibid.). At this point, Svilova was already teaching editing, especially with sound, at the Lenin Institute (Penfold 2013: 18). This activity was noted by Vertov in his diary only as "work". He did, though, praise her dedication and her industriousness: "She is tireless. If all the others were equally committed, victory would be assured" (Vertov 1984j [1933]: 172). But neither the recording nor its reproduction attained the levels by then possible. Very dissatisfied with the sound facilities in the cinemas, it was not until arriving in London, where he stayed between 15 and 17 November 1931 during his second trip abroad, that Vertov was able to convince the projectionist to regulate the sound level precisely: "Not only the audience, but Vertov himself, heard his film for the first time" (Penfold 2013: 144). Finally the directors had attained full control of the acoustic accompaniment of their films. Now Vertov could work on his own sound libretto, so that noise and sound did not eliminate each other. The composer Nikolaj Timofeev put together a musical-sound effects composition for *Enthusiasm* from Vertov's notes; this was broadcast over the radio and the broadcast then filmed.[24] Vertov's constant aspiration to link science and technology (film and sound technique, neurology, perception experiments, etc.) with art is interpreted by Lucy Fisher as his principal scientific view of film-making:

> Vertov regards the process of film-making as a scientific endeavor. His task is "to combine science with cinematic depiction in the struggle to reveal truth … to decipher reality."

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[23] Equivalent to approximately 1200 kilogrammes.

[24] Archival document with signature V 090, held in the Collection Dziga Vertov at the Austrian Film Museum.

> This is important because just as the scientist's depiction of the world has nothing to do with the average man's perception of the world (e. g., I see the sun "rise" and "set" and do not see the turning of the earth on its axis), so Vertov's depiction of the world in cinematic terms, though documentary, will be far from isomorphic with our perception of it. His model is life as it exists independent of the human preceptor, not life as experienced by Man. (Fischer 1985: 251)

In her further analysis of the film, Fischer counts 15 acoustic processes with the help of which Vertov breaks up the cinematic illusion: disembodied sound, sound superimposition, sound/visual time reversal, abrupt sound breaks, abrupt tonal contrasts, sound edited to create an effect of inappropriate physical connection to the image, synthetic sound collage, inappropriate sounds, mismatching of sound/visual distance, mismatching of sound/visual location, metaphorical use of sound, sound distortion, technological reflexivity, association of one sound with various images, and simple asynchronism of sound and image (ibid: 254). These techniques, she goes on to explain, also contain Vertov's self-reflexive work methods, this time on the level of sound, where they also serve to strengthen the film's political and thematic content, such as through "Acceleration, Sound Reversal and Images of Soundmen" (ibid.: 257).

While most of the aesthetic debates at the beginning of the 1930s revolved around the fears that the "real" sound would distract from film art, Christie points us to an early important contribution of Theodor W. Adorno and Hanns Eisler from 1947. The academic and the composer there put forward the thesis that the origin of musical accompaniment for silent films is the soothing of the public's unconscious fear of the silent images (Christie 1991: 178). Then again, Jurij Tynjanov, who understood the cinema as a successful attempt at an abstraction of image and sound, had condemned, in a 1924 article, the first attempts to get the cinema "to talk", which had been striving since the beginning of film history. As examples, one could name the Kinetophone system, developed by Thomas Edison, Oskar Messter's Tonbilder or the Vitaphone system. The Kinetophone, according to Tynjanov, was an unfortunate invention. The heroes would speak "as if in a proper theatre", although the strength of films lay precisely in the fact that the heroes do not "speak", but "utterance is given" to them. This takes place in a minimal and abstract form, making of film an art. In his opinion, the Kinetophone is a bastardisation of theatre and film, in other words, a lamentable compromise which pedantically and clumsily takes back the abstraction won by film (Tynjanov 2005a [1924]: 241). Tynjanov critically described the practical use of sound up to that time: "The music is *absorbed* by film – one barely hears it and pays no attention to it. (This is also good: for music which is interesting in itself distracts from the action; it forces something foreign into the film)" (Ibid.: 240). The director Vertov, however, resisted such a public reception by using "real" sounds and by the avant-garde deployment of tones (MacKay 2005).

Available Film Prints

The *Repertuarnyj ukazatel' kinorepertuar* (1931: 119) gives the film's length as 2600 metres (six reels), while the print held at the RGAKFD measures only 1849 metres. The bills of lading for the European tour in 1931 still state 2083 metres, while the German censor passed the film on 8 September 1931 with a length of 1806 metres (Tode and Gramatike 2000: 230). It is only possible to speculate about the large discrepancy of 800 metres from the original length; the original length of 2600 metres seems doubtful when one considers that its 1931 length was no more than 2083 metres. Vertov himself mentions no severe abridgement of the film in the relevant timeframe.

The film is held by the Austrian Film Museum in two versions, one print of 1849 metres from the GFF (identical to the RGAKFD print) and the so-called Kubelka version, which is 1854 metres long. The film-maker and Austrian Film Museum co-founder Peter Kubelka undertook a "resynchronisation" of *Enthusiasm* in the 1970s that was not uncontroversial in professional circles, after having noticed discrepancies between sound and image, these discrepancies ranging from just a few frames to over 300 frames. Though Gosfil'mofond had searched for the best available print, Kubelka maintained that it showed signs of deterioration and attempts at restoration. The latter, with its very bad, as purely cosmetic, restoration, was particularly regrettable – those who had restored the film had simply removed parts of either sound or image in order to make the two match (Kubelka 2006: 48; Loebenstein and Burger 2005). Kubelka, however, does not mention the many more noticeable inconsistencies in the last part of the film.

Critical Reception in the 1930s

From June till December 1931, Vertov made his second tour abroad with *Enthusiasm* (Tode and Gramatke 2000). His stay in Berlin was longer than planned (from 17 July to 12 September) as he did not at first succeed in organising the continuation of his trip, but after a closed screening for the press, the director was ultimately successful with his film. Vertov accompanied the screenings with the lecture "March 1930 – Radio-Eye", delivered in German. In Paris, he stayed with his youngest brother, Boris Kaufman, from 24 November to 6 December. There a screening was finally organised at short notice in the film club "Les Spectateurs D'Avant-Garde" – with great success, according to the *Film Kurier* (1931). A further important stop for the Russian film-maker was, as already mentioned, the British capital, where screenings organised by the London Film Society took place. Accordingly, many reviews from this year are available in the German and English press. On 5 October 1931, Vertov's film was banned in Germany by the Social Democratic government's Minister of the Interior, Dr. Joseph Wirth, under emergency decree, which led to further headlines. The performances announced for Hannover and Düsseldorf had

to be cancelled. Hans Richter coordinated letters of protest for the Filmliga, but the ban remained in force. In Vienna, too, there were disturbances and the film was confiscated. On 13 May 1932, *Enthusiasm* was screened for the press at the Kreuz-Kino under its Austrian title of *Das Lied Vom Aufbau*. The Weltfilm-Union was represented as being behind the event; this was presumably a branch of the Communist film company Weltfilm, based in Berlin. A newspaper article in the *Reichspost* (1932) was decisive in initiating disturbances in the cinema. These led ultimately to the film being banned in Austria. It was subsequently confiscated by the police under regulations designed to protect religion and the distributor was charged.

Prominent directors and film critics also praised and expressed their delight with *Enthusiasm*, above all the famous Charlie Chaplin, whose letter to Vertov would be repeatedly quoted by the Russian film-maker in his defence. For Rudolf Arnheim, though the film placed a demand on its audiences' nerves, nonetheless "this strenuous hymn to the joy of labour" transmitted "with extraordinary power the attitude of the Soviet people to life" (Arnheim 1931: 486). However, in order to comprehend such a work, the public must be receptive to what can only take place when its own daily work, its most real plans and longings here take the form of a symphony. It does seem that Arnheim had spoken with Vertov at length about new forms of viewer involvement, reminiscent of 3-D technology or the proletarian theatre of Piscator and Eisenstein. One was trying to link film and theatre. Perhaps Vertov also had films in mind in which, through special effects, characters seem to emerge from the screen, such as *Sherlock Jr.* (1924, Buster Keaton). Arnheim describes the conversation:

> Wertoff recently said to me in conversation that he envisions a kind of plastic film as an ideal, one which is no longer localised in the flat projection screen, but one whose characters seem to walk among the public or to make an entrance in the flesh. We would be still less prepared for a film such as this, for this enthusiasm requires the spectator's active enthusiasm. (Ibid.: 487)

Overall, Arnheim found, on the one hand, the photography always to be beautiful and constantly surprising; on the other hand, Vertov risked growing rigid with visual symbolism (ibid.). Lotte Eisner's verdict was equally ambiguous: the influential critic felt that Vertov would best solve the problem of sound editing by not "sticking" sound and image to each other. The camerawork was steadfast, calculated in detail and artistically well thought out. The director, however, could become lost in the abundance, searching for repetition, and he tended to dissect and become purely cerebral (Eisner 1931).

In similar vein, most of the contemporary film criticism found itself hovering between admiration for the structural power of the *Radioglaz* (Vertov's sound adaptation of *kinoglaz*) (Kaba 1931), the overpowering beautiful images and the creative sound editing and deprecation of the obtrusive propaganda for the Soviet state, wrote to Georg (1931), the *Acht-Uhr-Abendblatt* (1931), the *Magazin für alle* (1931) and Pinthus (1931). Vertov paraded forth tiring images of the Bolshevist world that "marched directly and mercilessly over our nerves" (Sinsheimer 1931).

It was an exhausting task for the intellect, wrote others, which one had already seen from Walther Ruttmann, full of repetitions, more of a "gorgeous acoustic album with splendid illustrations". Reference was made, though, to the German censorship, which had removed several sections, leading to some difficulties in comprehension, wrote the *Frankfurter Nachrichten* (1931) and the *Neue Montags Zeitung* (1931). In the English press, interestingly enough, there were complaints almost throughout about the volume in the cinema screening. According to *Film Weekly* (1931), the sound was deafening, and only the impression of a chaotic world, devoted solely to noise, remained. There were several reports that the total effect was one of a dreadful racket with wonderful camerawork and that the film was gruelling, reported the Week-End Review (1931), the The Manchester Guardian (1931) and the Chronicle (1931). The crude propaganda was also adjudged wearying in the English-language press like the *Daily Film Renter* (1931), while the footage of the Donbass workers was viewed as the best argument against Communism, as one had never before seen people working so hard and under such bad conditions, wrote the Eastern Daily Express (1931). One whimsical review suggested that the Russian women should pluck their eyebrows better and the presence of Aldous Huxley in the audience was also considered worth mentioning in *Sketch* (1931).

Formal Characteristics of the Film

It may be said, in general, that Vertov did not use many variations in the creation of the shot types, apart from the use of multiple exposures. With the exception of a very few intertitles, split screens and dissolves, there are no particularly noteworthy transitions. The figure of 93% for standard shots expresses this very clearly. Alongside missing frames and film damage, a total of four cue marks and five reel changes are annotated.

As already mentioned, in Ukraine Vertov photographed material subsequently inserted into three films. He also edited shots similar to some used in *Enthusiasm* into *Three Songs of Lenin*: the coal transport, a worker filmed from behind and glowing iron bars. For reasons of time, the Digital Formalism project was unfortunately unable to annotate information about the use of text, objects or camera movements in this film; therefore no statements on those matters are possible. Unusual camera angles, which strengthen the effect of the camera movements, are striking (Fig. 4.9).

This combination is especially obvious in the first part of *Enthusiasm*, in which Vertov, in accordance with socialist dictum, expresses his aversion to alcohol and religion. We see people fogged in "intoxication", either unable to stand upright because they are too drunk or bowing deeply before the cross in religious devotion. This feeling of losing balance is adroitly visualised by the film. The film's second title, *Simfonija Donbassa*, also hints at a (musical) emotional storm, linked to the enthusiasm for the Soviet cause. While it may be true to say that, in principle, Vertov's methods manifest themselves in all his films, one could perhaps say that

the additional level of sound in *Enthusiasm* serves to involve the audience more strongly. In combination with a stable image, the sound heightens the positive effect, while when linked with the unstable image (for subjects treated negatively), the destabilising effect on the spectator is viscerally intensified, potentially functioning as a deterrent to the "forbidden" action.

Three Songs of Lenin: Silence in the Film

The year 1937 brought drastic changes for the Soviet population, as, among others, the cultural scholar Karl Schlögel depicts in his comprehensive and informative *Terror und Traum: Moskau 1937*. The Russian philosopher Michail Ryklin (2008) locates the religious echoes of the nascent Stalin cult (in the early to mid-1930s) as far back as Lenin. In the increasingly life-threatening environment, everyone was declared a potential enemy, saboteur and traitor. Undesirable persons had to be swiftly removed from all paintings and films, while it was simultaneously expected of all great artistic projects that they accord the appropriate honour to the last Five-Year Plan. As is known, Vertov's diaries and private notes have been preserved only in versions that he and Svilova censored, from which both the allusions to and explicit mentions of Stalin were removed. For that reason, the current work is based on analysis of the filmic structure and less on Vertov's writings.

On the other hand, it is possible for subversive protest strategies to take place precisely in the execution of formal experiments. How, then, did a film-maker like Vertov deal with such expectations, especially in the light of the fact that the formal design of the work was for him such a central aspect? One could propose that, either consciously or unconsciously, Vertov, in a sense, jackknifed, by trying to adhere to the required principles of socialist realism but, in *Three Songs of Lenin*, remaining to a certain degree true to his formal principles. Without wishing to exaggerate any presumed resistance on Vertov's part to either the dogma of socialist realism or to the dictator Stalin, a viewing of the film in sequence reveals sections that "drop out" in their design. Each of these shots is only a few frames long. They are either literal still photographs (known as freeze frames, in which the same identical frame is printed several times in succession) or shots in which the people or action come to a complete halt. The technically frozen shots can, in many cases, be identified as

Fig. 4.9 Low-angle shots in *Enthusiasm*

shots from earlier works. The unmoving faces in close-up, however, obviously originate in new material. Notable, among others, are the repeated desert shots that Vertov filmed, according to MacKay, in Turkmenistan's Karakum Desert. Vertov had experimented before with still images; here they are inserted differently to the way they were deployed in *Man with a Movie Camera*, where they were more reminiscent of the methods of early cinema, such as that of the Lumiére brothers – the image would often remain motionless at the beginning of a screening and only then began to move (Elsaesser 2001: 35). In *Three Songs of Lenin*, this sequence of still images immediately follows the mourning ceremony at the coffin of the dead Lenin. The complete standstill of the world and the people who inhabit it can thus be read in the montage as an intensification of sorrow and distress, as a demonstration of the shock at the physical silencing of the dialogue between Lenin and his people.

Speeches and interviews are, nonetheless, an important device in the sound version of *Three Songs of Lenin*, even if not the dominant one. Additionally, by building the oral history prominently into the film, Vertov was reacting to new tendencies in the literature of the time and expanded this procedure still further in *Lullaby*. Orally transmitted stories constituted a kind of canon of socialism, according to Bulgakowa (2003: 56). Perhaps it is precisely for that reason that the sudden silence, formally underlined by Vertov, is so effective. In the silent version of *Three Songs of Lenin*, the ceremonial hush is underlined through an intertitle: "... and life stood still for 5 min".

It must remain purely speculative as to how risky such a subtle formal experiment really was in the middle of the 1930s. There is at least some indirect information as to Vertov's mental state at this time, in the form of a text written in approximately 1934.[25] As Thomas Tode and Barbara Wurm determine in their commentary, this note with its many alterations, written quickly and often illegibly, is evidence of Vertov's constantly worsening work situation in the middle of the 1930s:

> The author repeatedly uses the text to encourage himself, not to moan and not, in the bureaucratically mandated waiting period – Tri pesni o Lenine had no premiere in the Soviet Union for a year during 1934 – to neglect activity. Alongside Michail Kaufman, Il'ja Kopalin and Irina Setkina are also mentioned. The film (and ultimately its success) is here celebrated by Vertov as a "festivity of Kinoglaz." (Austrian Film Museum et al. 2006: 195)

Available Film Prints

In 1934 Vertov produced a sound version, in 1935 a silent version, the latter intended for the cinemas in the provinces, which were mainly not yet equipped for sound films. Such work was customarily not carried out by the directors themselves, but was taken over by assistants. In this case, Vertov himself was directly involved; this

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[25]Archival document with signature V 122, held in the Collection Dziga Vertov at the Austrian Film Museum.

has been established by Derjabin, who categorises the silent variant as a work in its own right:

> Silent versions were generally considered inferior; it was known that they were made by assistant directors, and so as a rule they remained unreviewed. In the case at hand, however, the silent version was not just a poor relative of the sound one: we know that Vertov and Svilova themselves worked on it, and the two versions differ considerably – not in quality, but in content and in the principle of montage. (Derjabin 2004: 75)

A particularly interesting detail are shots of Stalin in the Kremlin, apparently shot by Jakov Tolčan for Vertov with a concealed camera, which are contained only in the silent version. The worthy cameraman would later recall the adventure with fright: "Suddenly Stalin came into the Kremlin courtyard. It was like this with us: we were so fond of Dziga Vertov that we always followed his instruction 'Die, but film'. I had to sit down afterwards; not only my hands were shaking, but also my legs. I had run with the camera in my hands with my heavy boots on. That was the last shooting of that kind I did. I understood that from this point on the risks were too great".[26]

In 1938 Vertov had to revise both versions due to pressure "from above". He used the original negative for this, so that the 1934 and 1935 versions no longer exist and one must now rely on written documents, such as editing lists and lists of intertitles, for knowledge of their content and the original order of shots. Finally, in 1970, 16 years after Vertov's death, the director's closest collaborators were entrusted with carrying out a so-called reconstruction. With much attention from the media, Vertov's widow, Svilova, the cameraman Il'ja Kopalin and the cutter Semiramida Pumpjanskaja put together a new version of the film. As reported in the contemporary press, a complete new recording of the sound was made, and the material that was in poor condition had to be processed again.

The chronological points at which *Three Songs of Lenin* was produced and reconstructed align with key moments in Soviet history, as MacKay points out. For him, the presence – or the absence – of Stalin in the film is essential to understanding it:

> The three versions coincide with three quite different political moments – specifically, the full-scale inauguration of Stalin's "personality cult" (and the waning of Lenin's) during the Second Five-Year Plan (1933–37); the complete establishment of the Stalin cult by the purge years of 1937–8; and the ongoing anti-Stalinist revisionism of the early "stagnation" period (1969–70). Given that the transition into (and out of) "Stalinist culture" is the real issue here, it is inevitable that the presence or absence of "Stalin" and "Stalinism" in Three Songs will figure centrally in any interpretation of the film. (MacKay 2006: 377)

In the case of *Three Songs of Lenin*, it is also important to distinguish precisely between the extant versions, with many different sources available for the given length. This film is a special case, as on 21 January 1938, the Sojuzdetfil'm studio published complete editing lists with content descriptions for both versions. These documents are available at the GFF archive. Of this booklet, however, there are also

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[26] Excerpt transcribed by the author from Chris Marker's film *Le Tombeau d'Alexandre* (1993, France). It may be assumed that the shots were only inserted into the film in 1938.

further censored versions, deleting, for example, in the sound version, the name of Nikolaj Ežov (chief of the secret police from 1936 to 1938), as well as Stalin's speech from the end of the film – probably in preparation for work on the "Stalin-free" version. In 1971 Reklamfil'm also published an editing list of the 1970 reconstruction.

It is simplest to begin a listing of the lengths of all these versions given in the literature with the extant prints. It is the 1970 reconstruction, measuring 1693 metres, which is held by most archives in the West, including the Austrian Film Museum. The Austrian Film Museum additionally holds prints of the 1938 sound version (1843 metres) and the 1938 silent version (1466 metres), which originated in Russian archives. No archive in Russia holds both the existing 1938 versions (sound and silent); in Gosfil'mofond only the sound version is preserved, while the silent version is archived only in the RGAKFD. It is more difficult to establish the lengths of the original versions. The *Repertuarnyj ukazatel' kinorepertuar* gives a length of 1873 metres (six reels); one may assume this refers to the 1934 sound version. However, in the GFF archive, there is a 1934 protocol about the film, giving a length of 1813 metres. The situation is further complicated by the existence of an additional editing list from 1937, available both in the GFF and at RGALI, which states a length of 1747 metres. At least three different statements of length exist for the 1935 silent version: Tode speaks of a length of 2045 metres (seven reels) (Tode and Gramatke 2000: 233), while Tsivian has it as 2100 metres. Both authors, with a high degree of probability, are referring to the 1935 print, but do not provide a source. The most interesting document, however, is a protocol from Glavrepertkom, dated 7 December 1934 and held by the GFF, which measures the film at 1650 metres.

In the editing list published in 1938, the sound version measures 1888 metres, which is ca. 40 metres longer than the print to be found in archives today. There is also at least one more unpublished editing list, to be found in the Austrian Film Museum, giving only 1797 metres as the length. For reasons that are not known, a significant part of the film is, however, missing from this list, namely, Stalin's speech at the end of the film, so it cannot be seen as representative.[27] Seth Feldman's mention of a length of 1797 metres may be assumed to derive from this editing list. He also refers to the fact that it does not include Stalin's speech from the end of the film and arrives at a total length of 2047 metres, were the speech to be included (Feldman 1979: 123). In the Sojuzdetfil'm publication, the silent version is given as 1533 metres, a significant discrepancy from the extant print measuring 1466 metres. An editing list was also published in 1971 on the occasion of the reconstruction; it gives a length of 1650 metres, although the film today measures 1693 metres. Feldman's statement that the 1970 reconstruction length was 1605 metres remains puzzling; it could perhaps be only a transcription error (ibid.). Such minor discrepancies can probably be accounted for by either errors in measurement or different measurement methods, rather than actual differences in the prints. Variations in procedure at different archives, for example, could lead to the measurement including the leader film at the start and end of a reel or of introductory titles.

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[27] Archival document with signature V 108, held in the Collection Dziga Vertov at the Austrian Film Museum.

Three Songs of Lenin was the only film Vertov made for the Mežrabpomfil'm company.[28] As early as 1934, however, there had been plans for further joint projects; there are documents attesting to this. The director submitted sketches prefiguring a new type of film production.[29] Jay Leyda, one of the American pioneers of research into Russian and Soviet cinema, also stated that there were specific preparations for a series of short films about cities for the Intourist travel agency, which seem not to have been produced.[30] Leyda himself participated as an assistant on one of these films that was to have dealt with Leningrad: "The Ivens film was not ready yet, so Vertov, then cutting Three Songs about Lenin at Mezhrabpom, took me into his group that was making, with no more than a sense of duty, a series of short films for Inturist, starting with one on Leningrad, where I was sent in August" (Leyda 1983: 311). Jay Leyda, a great admirer of Dutch film-maker Joris Ivens, also writes: "[...] and Joris Ivens had a plan to make a Soviet film around his Borinage, a sharp and sensitive reportage on Belgian coal-miners, by shooting sound-sequences in Soviet mines and in the Moscow subway construction" (Ibid.: 310).

Critical Reception in the 1930s

The film's significance in the canon of film history was seen differently in the Soviet Union and the West. While in the West, Vertov was known mainly for his experimental film *Man with a Movie Camera*, Russian film historians into the 1980s regarded *Three Songs of Lenin* as Vertov's most important contribution to Soviet and international cinema. The film was made by Mežrabpomfil'm, the last privately run production company and had its world premiere at the second Venice Film Festival in August 1934, before it had been officially released. In the same summer, screenings were organised for delegates to the Writers Congress, as were private screenings for foreign guests in Moscow. The German author Oskar Maria Graf wrote about his meeting with Vertov at this time: "At 'Meshrabpom' I saw Wertoff, the 'film eye' again. We had encountered each other in Munich in 1930 or 31. Now Wertoff showed us his beautiful, wonderfully atmospheric film Three Songs of Lenin" (Graf 1974: 97).

On 1 November 1934, the film was finally screened for the first time in Moscow. The performance had originally been planned for 21 January 1934, the anniversary of Lenin's death, and till November 1933 Vertov had had great difficulties in completing the film at all. He goes into detail about these problems in his diary (Tode and Gramatke 2000 [1935]: 44). At the Moscow premiere, however, the film

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[28] Archival document with signature D 017, held in the Collection Dziga Vertov at the Austrian Film Museum.

[29] Archival documents with signatures V 131, V 132 and V 133, held in the Collection Dziga Vertov at the Austrian Film Museum.

[30] Archival document with signature Pr USS 076, held in the Collection Dziga Vertov at the Austrian Film Museum. Feldman also mentions this project with reference to Leyda.

received the full support of the Soviet distributors and was heavily advertised; the newspapers, for example, reported on organised visits to cinemas by Red Army soldiers. Emotions ran high during the screening, especially at the third song.

The contemporary press like *Pravda* (1934) praised Vertov as a talented director who had contributed everything essential to the film. A further press document also includes, among other film announcements, two short articles about *Three Songs of Lenin* (Radek and Bucharin 1934). According to one of them, the film must absolutely be seen; Karl Radek and "Comrade" Bucharin were quoted as saying that the film had greatly impressed them. In the other article, one may also read of a screening of the film in New York on 8 November. The American newspapers *The New York Times* and *Herald Tribune* had responded with enthusiasm (ibid.). As was the custom, famous foreign personalities were used as references; the British author H. G. Wells thus visited Mežrabpomfil'm on 26 July 1934 and followed Vertov's film with great enthusiasm. According to *Rot-fil'm* (1934) and the *Literaturnaja gazeta* (1934), Wells claimed (Wells 1970) to have understood the whole film without any need for translation and praised it effusively. In another article in *Gegen Angriff* (1935), *Three Songs of Lenin* was described as a "new great victory of the documentary film", with special mention of the "ten unknown film documents of Lenin" which Svilova had unearthed from archives for the film, a fact Vertov never tired of stressing.

Formal Characteristics of the Film

The state of prints of the film is complicated and additionally, at the beginning of the project, only the restored sound version of 1970 was available, though it is largely identical to the 1938 sound version (Heftberger 2011). In this film there is perhaps the greatest difference between the subjective impression and the objective breakdown. The types of shots used in it are congruent with the naturally elegiac theme; we certainly find many dissolves, as well as a multitude of fades in and out. Alongside missing frames and film damage, a total of eight cue marks and three reel changes are annotated. Text is seen at a total of 58 points in the film, either diegetic (52 times) or superimposed (six times).

The many intertextual duplicates with *Kino-Eye* have already been mentioned, as well as the shots that are to be found in the other films. A detailed listing of all shots is not expedient, as a great deal of material has been taken on in complete blocks. In this film it is notable that many pans and tilts are used and in an almost exactly equal number. More precisely, in *Three Songs of Lenin*, there are 102 pans to the right and 105 to the left, as well as 47 tilts upwards and 40 downwards. In no other film is the division so balanced. Even if there is no evidence of conscious calculation, this result is still remarkable – as an unconscious procedure perhaps still more so, as it suggests a kinaesthetic link to the film's subject. By that, I mean that the film is oriented towards balance and harmony between oppositions: Lenin's death and his continued spiritual life, sorrow and joy, the old and the new.

The play of sound and silence is for me nonetheless the film's dominant. Vertov actually designed two completely different versions of *Three Songs of Lenin*, intended for different target audiences. The shots with live sound are striking; this was a technical process that was very important to Vertov. A total of seven direct addresses to the camera may be heard in the film, including the well-known interview with the cement worker Marija Belik and Lenin's own voice, taken from an early sound recording. Three further short speeches, of a company manager and of two peasants (one female, one male), are also present. Music and sound effects (shots, bells, etc.) are similarly annotated (Fig. 4.10). The prominent deployment of speeches by militant, exemplary and progressive people is precisely what enables the silence that represents the film's ground zero to protrude more strongly still. Vertov must later resolve this traumatic sequence and he decides to do this with the authentic human voice.

In *Three Songs of Lenin*, many shots from *Kinopravda No. 21* are used which fundamentally deal with the same subject, namely, the life and death of Lenin, as well as his continuing influence after his death. Due to the extent and complexity of the reused material, a comparison would, though, be worth an investigation of its own. There are also at least two extant versions of *Kinopravda No. 21*: a print held by the GFF/Austrian Film Museum and a reconstructed version created by the Munich Filmmuseum.[31] The Munich reconstruction, which combines material from the RGAKFD and Gosfil'mofond, was released on DVD in 2014 and is thus available for the first time in the Edition Filmmuseum 86.

There is, in addition, yet another interesting formal similarity between the opening sequence of *Kinopravda No. 21* and the silent version of *Three Songs of Lenin* (1938). Not only do the same intertitles appear, but Vertov uses the same protagonists once more, although nearly 10 years separate the two films (Fig. 4.11).

In this edition of the newsreel, Vertov was not very creative, as far as the variation of shot types goes. The proportion of standard shots stands at approximately 70%, with a further 22% taken up by the intertitles. Only a longer animated sequence, dealing with Lenin's illness, is visually noteworthy. Several missing frames and instances of damage to the film are annotated, as well as a total of eleven cue marks and two reel changes. Text appears in the image in 29 shots; in 3 of those cases, it is superimposed, with the remainder being diegetic (Fig. 4.12).

Fig. 4.10 Shots with live sound in *Three Songs of Lenin*

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[31] Two editing lists of the film are also available. The archival document with signature V 50, held in the Collection Dziga Vertov at the Austrian Film Museum, and a more complete editing list which was published in book form (Ginzburg 1959 [1924]. Details regarding colour/b&w, sound, positive and negative are also given there.

Fig. 4.11 The beginning
of *Kinopravda No. 21* (left)
and *Three Songs of Lenin*
(right)

Fig. 4.12 Superimposed text in *Kinopravda No. 21*

A total of 22 shots from *Kinopravda No. 21* can be isolated that are reused in other Vertov films, namely, *Stride, Soviet!*, *Kino-Eye* and *Three Songs of Lenin*. Above all these are shots of Lenin, both those from his lifetime and those of the funeral ceremony. Only occasionally do camera movements appear in the film, which could also be due to its short length, as compared to the other films. A further reason may be the hybrid form itself (animation is also inserted alongside much archive material) – the scenes of Lenin lying in state were filmed with little movement, as quietly as befitted the occasion. Overall, it is difficult to make statements, including about the film's dominant, as the film material available makes up only about half of the reconstructed version.

Lullaby: The Subjective Camera

It was finally in the film *Lullaby* that Vertov dealt with a subject that had occupied his thoughts for a long time: that of the Soviet wife and mother. Whether or not the unfulfilled wish for children Vertov and Svilova shared was one of the reasons for this,[32] several other arguments for this choice of subject can be advanced, not least those to do with the party line. Women were in general a popular subject in films at this time and were presented both in their traditional roles as well as in their new roles as mothers, heroines of labour, parachutists and pilots. Derjabin (2009) used the showcase project of women's emancipation in the Soviet Union to explain the choice of the popular subject:

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[32]Archival document with signature FM 075, held in the Collection Dziga Vertov at the Austrian Film Museum.

> Vertov had always given the "women's subject" great attention. He assumed that the breadth
> and intensity of the country's social restructuring could be best and most clearly displayed
> by means of the changes implemented for women. The "women's subject" underwent a
> long and complicated development in his work and it was constantly being enriched by new
> semantic connotations and overtones – from the utopian to the quite private and intimate.[33]

It is difficult to see *Lullaby* as a continuation of the methods previously typical of
Vertov. It is, in fact, to be assumed that for various reasons the director at this time
departed from a formally experimental type of film-making. MacKay makes an
interesting proposition, linking the subject of women with the decision to change the
approach to camerawork: "Women, however, were certainly to provide the first field
of study for Vertov's new method of, as he put it, the direct 'recording-filming of a
person's behavior'" (MacKay 2007b: 6). Vertov was thus spurred on by the success
of the live sound filming of the worker Marija Belik in the film *Three Songs of Lenin*
to shoot future live sound footage in the most natural way possible and preferably
without the awareness of the person concerned (ibid.: 7). The result can be seen in
Lullaby: extracts from a sympathetically affective interview with parachutist and
worker Nina Beljavskaja are integrated into the film. As MacKay writes, due to
technical problems, the majority of the footage could not be used. Hicks sees the
frequent use of the interview as an extension of Vertov's basic journalistic approach
(Hicks 2007: 98). There is disagreement as to whether Vertov's interview is the very
first in Soviet cinema (ibid.: 160). Vertov's plans, however, were far more ambitious
than such first attempts, even if he was unable to realise them:

> Vertov's plan for the entire film was apparently to offer a kind of scientific comparison of
> women's behavior under capitalism to that under socialism; to this end, he attempted at
> least through mid-1936 to get permission to shoot and collect archival footage in Europe,
> seemingly counting on the help of his cameraman brother Boris Kaufman, then in France,
> in realizing this quite grandiose project. (MacKay 2007b: 9)

The long period of time in which Vertov worked on *Lullaby* (from the beginning
of 1935 to the end of September 1937) was overshadowed by the Moscow show
trials. *Lullaby*, too, bears the signs of undesirable persons who were excised: a black
border is required to cover Jan Gamarnik, the leader of the Red Army's political
administration, as he had committed suicide in May 1937 and was no longer allowed
to appear in the film (ibid.: 12). If saboteurs and liars were everywhere, as was then
generally said in the Soviet Union, Vertov's concept of *kinoglaz* acquires a quite
topical, political significance. For how is one to take life unawares and show people
as they really are when everything about their conduct could be mere play-acting?
And how could such conduct be marked as subjective, in a film-technical sense?
MacKay finds clear parallels to the later *Cinéma vérité* but also to the film-maker's
camerawork: "The subjectivized camera of Lullaby, however, with its performance
of associative glissements, attempts to mimic the movements of consciousness,
along specific pathways to be sure" (Ibid.: 16). In a very bold bridging between
Vertov's swaying camera, on the one hand, and a socialist-Communist conviction
on the other hand, MacKay puts it that a typical Vertov camera movement is charged
with a new meaning:

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[33] Archival document with signature FM 075, held in the Collection Dziga Vertov at the Austrian
Film Museum.

The camera couldn't read thoughts, but Vertov's editing attempts to make visible the ideal thought, the thought that needed to be thought, that needed to be followed. Thus "socialist consciousness", in a way, becomes by the time of Lullaby as rigid and unprogressive as the benumbed "religious" motions that Vertov's camera had mimicked in the early films only to expose and reject, even while Lullaby also finds a way to continue the old kino-eye project of setting up the camera as an ideal to which the spectator must strive: toward mobility, synthesis, commitment. (Ibid.)

Vertov called *Lullaby* his fourth song, following the three songs of Lenin: "The first three songs were dedicated to Lenin. The fourth song is the first song in a cycle of songs dedicated to the free woman [...] she does not worry about the fate of her children, about their present and future" (Svilova-Vertova and Vinogradova 1976: 34).

Available Film Prints

The *Repertuarnyj ukazatel' kinorepertuar* gives the film's original length as 1622 metres (seven reels). The discrepancies between extant prints of this film are overall relatively minor: the print preserved by GFF/Austrian Film Museum measures 1578 metres, and the print available at the RGAKFD is scarcely longer, measuring 1606 metres.

Critical Reception in the 1930s

From 1934 onwards, Vertov is no longer mentioned in the Soviet press. Although his film was not officially banned, until 1950 permission to screen it could only be renewed for 1 year at a time (Bulgakowa 2003: 75). Two central events are of importance in the period from 1930 to 1935: the "campaign" against the documentary film in the journal *Proletarskoe kino,* and the public denunciation of Vertov, and the awarding of the Krasnaja zvezda (The Red Star) medal to Vertov. This emotional roller-coaster can be seen as having significantly contributed to the physical and mental breakdown Vertov subsequently suffered. In addition, after its premiere on 1 November 1937 and its general release in mid-December 1937, performances ceased after only 5 days (Derjabin 2001: 40). Vertov's diary entry on this reads: "Lullaby was forcibly butchered during editing and given little coverage in the press. Undervalued, unpreserved, it is destroyed" (Vertov 1984l [1945]: 266). Jay Leyda had already left the Soviet Union before the release and could therefore write little about the matter in his standard work, *KINO*: "Vertov's next film was released 3 years later, in November 1937, after I had left the Soviet Union, and I have always regretted not seeing that next step in his development [...] It was entitled Lullaby, and I have read no account of its content beyond that it was concerned with the women of the Soviet Union and of Spain" (Leyda 1983: 313).

The author Otten, in one of the few responses in the contemporary film criticism, praises Vertov and Svilova as true masters of montage and goes on to point out the closeness of the Vertov mother with the female protagonist of the film Intolerance (Otten 1937). The actress Lillian Gish is juxtaposed with Vertov's Soviet woman, who, in addition to her happy motherhood, is also a parachutist or a pilot. The film and cultural studies scholar Natascha Drubek takes this thought further in her article "Die Wiege von Griffith und Vertov" (The Cradle of Griffith and Vertov) and underpins her analysis of Vertov's female characters in film with diary entries by the director and further observations about the woman in Griffith's work and in the Soviet Union (Drubek-Meyer 1994).

Vertov remained active in the film industry for nearly 20 more years (until his death in 1954) and was able to make eight further films, although none of these could approach his earlier works. The director finally landed back in newsreels. Between 1944 and 1954, he was employed at *News of the Day*, of which he was editor. The director never gave up hope of being able to make his own films once more, even though his physical strength was ebbing. His many drafts for new film work and his desperate suggestions for reorganisation of film production attest to his physical and mental condition.

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Chapter 5
The Filmic Structure as Visualisation

> To represent a dynamic study on a sheet of paper, we need graphic symbols and movement.
> (Vertov 1984 [1922]: 9)

Vertov's films challenge the audience's viewing conventions today just as they originally did. A single viewing reveals only a certain degree of the manifold references, anticipations and reversions between individual images and themes and spectators not infrequently complain of dizziness after a screening. These reported experiences are certainly plausible, and they serve as evidence of the complex manner in which Vertov's films are constructed, as well as of the strong visceral effect they provoke. It is thus not astounding that the desire is often expressed for a visual orientation aid to Vertov's films. Comprehensive visualisations have been created, not only by the software of architect Stavros Alifragkis (2011) but also by the graphs of film scholar Vlada Petrić, which can be understood as attempts to visualise Vertov's filmic structure. Vertov, too, alongside his activity in film, prepared tables and diagrams in which he singled out and visualised individual sections of his film work.

The manual annotation carried out for the Digital Formalism project has resulted in an abundance of data for eight of Vertov's films that has hitherto not been evaluated in a work of film scholarship or film history. After completion of the project, I carried out further annotation regarding concrete questions, complementing the data already available. My work was concentrated, above all, on the creation of visualisations which, on the one hand, arose from the annotated data and, on the other, made direct use of the digitised film material. Many suggestions and findings emerged from my close collaboration with Yuri Tsivian and Lev Manovich. While Tsivian's Cinemetrics project encouraged individual researchers to work as independently as possible and to visualise films, the creation of complex graphic visualisations is only possible in tandem with a suitable network, in which processes for visual analysis and depiction may be developed. In both technical and content terms, Manovich provided this support for me.

The Software Studies Initiative research institute in San Diego, under the direction of Manovich, is one of the most prominent and most productive university facilities in the field of information, aesthetics and visualisation. Although Manovich is interested mainly in the visualisation of large quantities of data (the macro level), he is open to cooperation in the framework of detailed studies of individual films (the micro level). The visualisations created for the present volume are intended primarily not to serve as tools for specific analysis of individual questions but to introduce and discuss a whole range of experiments. At the same time, they document the work process of this pioneering activity chronologically, in a certain sense presenting the "evolution" of different forms of depiction. Originating in relatively simple graphic depictions, which in statistical form provide a meaningful overview of the numerical appearance of filmic procedures (such as camera movement or shot type), they proceed to very complex visualisations, ultimately presenting a broad spectrum of different approaches. The visualisations presented here often originate in macros specially written for the purpose by Manovich (a result of instructions for the processing of information), though in many cases I was able to continue working independently, using ImageJ, an open-source software developed by Manovich and which is extremely suitable for the analysis of individual partial aspects of films.[1]

A large part of the chapter, nonetheless, deals with Cinemetrics, the low-threshold, and thus very inviting, possibility of visualising the scaffolding of a film relatively quickly. Cinemetrics is a term familiar to all who deal with statistical film analysis, although, alongside the enthusiastic voices there are also some that are critical. In order to be able to discuss the web platform and its tools with the aid of Vertov's films, I annotated about ten of his works online, not all of which can be discussed. This should show some of the advantages and convey some of the methodological problems, particularly from an archival point of view.

The visualisations, though, were overwhelmingly developed from the example of *Man with a Movie Camera*, which suggested itself due to the film's complexity and familiarity but also due to the fact that the data available from the annotation was so abundant. Beyond that, different visual depictions were tried out on further films for which particular questions had arisen. For example, the film *The Eleventh Year* was chosen to be a pilot film for formalistic research in the Digital Formalism project. For this, there were also historical reasons, as the German film *In the Shadow of the Machine* (1928, Albrecht Viktor Blum) contains lost material from the last reel of the Vertov's film. Hitherto, only the statements made by Vertov and Blum themselves, which differ significantly, attested to this. Now, for the first time, a comparative analysis enabled the material within *In the Shadow of the Machine* to be identified. Overall, though, comparatively little research and publication have been devoted to *The Eleventh Year* (MacKay 2007a, Hicks 2007, Tsivian 2004). There are similarities to the case of *Three Songs of Lenin*, which has been selected for specific investigations and the generation of visualisations in the framework of this book.

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[1] For more information cf. http://rsbweb.nih.gov/ij/features.html. Last accessed 17 Aug 2018.

Visualisation of Formal Characteristics of Films

There is a long tradition of visual depiction of formal characteristics of films within the field of film production. These were originally prepared by the director or a member of the film crew; their purposes varied. Gifted artists such as Sergei Eisenstein were independently able to commit their concrete visions for the composition of shots to paper and transmit them personally to others for implementation. Oksana Bulgakowa (1996: 143) has published a series of drawings by the director. Such depictions, which graphically portray the content of the image prior to shooting, are customarily known as "storyboards". In the process of visualising the screenplay, individual drawings already determine formal characteristics such as shot size, angle and perspective.[2] These sketches of image content may be further supplemented and enriched with additional information about a sequence or a scene, in order thus to be able to display detailed processes, such as the spatial movement of the camera, or the lighting. Film editors also often make use of processes of their own development to visualise the progress of a film. Walter Murch prepared so-called photoboards, which, in the precomputer era, helped him to maintain an overview of footage shot and of the narrative. Representative frame enlargements for each sequence were attached to a polystyrene board and could thus be freely tried out in different combinations (Ondaatje 2002: 236).

Film scholars, too, use optical aids in order to develop, visualise and support these. The manner in which the data is extracted from the films depends on the focus of the research and the available resources. A well-known example of the visualisation of spatial structures in film is Raymond Bellour's analysis of *North by Northwest* (1959, Alfred Hitchcock), which made use of cards for individual sequences, showing the movements of protagonists in an abstracted overview, for example, the main character fleeing from the pursuing airplane (Bellour 2000: 106). Bellour also prepared further visualisations of scenes relevant to his analyses in which he used symbols to reproduce actions topographically, resulting in sharp criticism from Barry Salt, who questioned its scientific value (Salt 1992: 16).

More frequently, diagrams are used, in which the individual categories are represented only numerically and statistically, without showing pictorial content either as a reproduction of a frame or as a simplified sketch. The literature of film scholarship contains sufficient examples in which shot size, camera movement or perspective are depicted in table or diagram form. In his dissertation *Zur Bedeutung der Kamerahandlung*, Eberhard Opel (1990: 105) attempts to derive typical patterns for individual genres from the breakdown of camera movements. He deals, however, largely with television series, engaging in the categorisation of typical processes in American crime series or a "Federal German series standard". For film as a timed-based art, depictions of temporal processes on either the x or y axis of a diagram suggest themselves. Conventional video editing programmes work on a similar principle. While the x-axis represents mainly the elapsed minutes of film, categories

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[2] The invention of "storyboards" is attributed to the Walt Disney Studios.

important to the analysis are entered on the y-axis. The range is from a relatively unambiguous semantic narrative subdivision into individual sequences independent of the film in question to categories specially developed for the film being studied.

Helmut Korte may be considered a pioneer in the German-speaking sphere; he builds on work previously done by film scholars of the 1970s.[3] In terms of academic history, it is interesting to note that Korte has observed a growing interest on the part of students and young scholars, although the quantitative graphic methods of visualisation had "been largely repressed and lapsed into obscurity for a variety of reasons". (Korte 2006: 95) He has emphatically advocated for a graphic process of film visualisation, as it is a highly complex system of statements argued auditively, visually and temporally, which "tends to remove itself from purely verbal interpretation based only on viewing" (ibid.). The aim is to make statements about the film checkable and more precisely expressed – away from a subjectively coloured interpretation and towards an intersubjectively comprehensible analysis. Alongside this, Korte emphasises the mechanism of effect on audiences, which proceeds from the personal impression: "The filmic constitution of meaning always takes place through a construction of the public influenced by personal, situational and sociohistoric variables, which can strongly vary in individual cases, depending on the degree of conventionalisation of filmic reception standards; in the most extreme case, each viewer sees his own film!" (ibid.)

The film must thus be secured in its complexity of effect. This takes place in various graphs which each illustrate different aspects, such as the course of the action and length of sequence, cutting rate, storyboard and shots with dominant paths of motion, which Korte exemplifies with *The Hymn of Leuthen* (1933, Carl Froelich). The point of departure is the traditional sequence protocol, for which, however, suitable images from the film must already have been chosen. One may note in general, regarding Korte that he works directly with image content, whether in the form of frame enlargements or drawn storyboards. Subsequently, the set-up is visualised in a so-called sequence graph, giving the running time at left and describing the content at right. Depending on length, the cells of the column are either longer or shorter. Korte's attempts to illustrate the paths of movement in the print medium (with arrows indicating direction) should be especially noted. Although this effort certainly depicts a useful procedure and, not least, remains in the tradition of other film scholars like Vlada Petrić (1987: 170), filmmakers like Sergei Eisenstein (Bulgakowa 1996: 143),[4] or cameramen like Vladimir Nilsen (1972: 99), the limitations of such graphs quickly become clear, and the transmission of the movements is not intuitively enough accessible.

Events on the sound level can also be the focus of investigation; the appearance of dialogue, song or music thus appears on the y-axis for the film *A Blonde Dream* (1932, Paul Martin). A classification according to temporal processes can also be of

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[3] Korte names Friedrich Knilli and Erwin Reiss, Knut Hickethier and Joachim Paech, Thomas Kuchenbuch, Bernward Wember, Michael Schaaf and Gerhard Adam as well as Alphons Silbermann.

[4] Cf. the sketches for the film *Bronenosec Potemkin*, in which the directions of movements are already entered by means of arrows.

interest in analysis, for *Berlin: Symphony of a Great City* the cuts per minute were shown on the y-axis corresponding to the times of day in the film on the x-axis. As a further example of different content emphasis, one could mention the graphic display for the film *Zabriskie Point* (1970, Michelangelo Antonioni), in which the appearance of the protagonists over the course of the film's running time is registered. In this context, "Das Instrumentarium der formalen Filmanalyse als Grundlage einer ablaufbegleitenden Quantifizierung dramaturgisch gestalteter Stimuluspräsentationen", by Alfred Dier, Hans-Jörg Tinchon and Peter Vitouch, is helpful reading, as are the considerations expressed in Werner Faulstich's standard work *Grundkurs der Filmanalyse*. In addition, Helmut Korte and Werner Faulstich already tried to develop computer-aided visualisations in *Filmanalyse Interdisziplinär*. In Thomas Kuchenbuch's *Filmanalys*, *Theorien – Methoden – Kritik* diagrams are also cited in which, alongside the elapsed time on the x-axis, the y-axis records the size of shots. Using two films on the subject "Third World", a comparative analysis could thus be carried out on the deployment of classic camera settings.

A perusal of the secondary literature makes clear that to date the focus has been less on developing forms of depicting film data in principle and more on the individual cases of selecting, annotating and presenting specific categories. One reason for this is the time-intensive nature of the data mining; another reason is doubtless that the technical means required to process large quantities of data, research them interactively and, above all, to present them, have been hitherto available to an insufficient degree.

A small digression may serve, on the one hand, as a historical case study of formal film analysis and, on the other, build a bridge to Vertov, for it was precisely the film *Man with a Movie Camera* which, in the 1960s, inspired many film scholars in the West to both theoretical considerations and practical investigations. Alongside comprehensive verbal descriptions, such as that of Graham Roberts, the film always also stimulated measurement and description in data and graphs.

The film scholar Vlada Petrić can, without doubt, be considered the pioneer of this formalistic access. Following his work in the 1980s, the research has today been revived and continued, foremost – also in combination with annotation software – by Yuri Tsivian. In the 1970s and 1980s, further segmentations of the film were published, which, however, according to Petrić, had been prepared following other principles. Stephen Crofts and Olivia Rose (1977) established a thematic-structural concept and arranged the film in seven parts: Credo (shots 1 to 4); Introduction: Cinema Public (shots 5 to 67); Section One: Awakening (shots 68 to 207); Section Two: Day and Work Begin (shots 208 to 341); Section Three: Working Day (shots 342 to 955); Section Four: Work Ends, Leisure Begins (shots 956 to 1399); and Coda: Cinema Public (shots 1400 to 1716). Bertrand Sauzier (1985), though, tallied 1712 shots.

Petrić recommends repeated and sequential viewing of Vertov's films, a practice he himself exemplified with *Man with a Movie Camera*. He sees this procedure as the only adequate analytical "answer" to the actual process of the film's creation while also indicating the close collaboration of the couple: "Vertov and Svilova spent

nights and days cutting out and adding in single frames of innumerable shots scattered throughout their workshop, arguing for hours whether a shot should be one frame longer or shorter" (Petric 1987: 79).

Petrić has published on *Man with a Movie Camera* several times, and his work still constitutes the basis for a strict formalistic analysis of the film. His standard work is still *Constructivism in Film – The Man with a Movie Camera: A Cinematic Analysis*, but he has also published further articles on the film, such as "Dziga Vertov as Theorist". The most important document for the purposes of the present investigation is an unpublished appendix to *Constructivism in Film*. It bears the title "Appendix VI". In it may be found a complete annotation of *Man with a Movie Camera*, precise down to the frame level (Petric and Reeder n.d.). In the 1980s, Petrić viewed the 16 mm print preserved at the Harvard Film Archives. This is no coincidence, as for many years Petrić was the curator of the film collection there, till his retirement in 1995. He conducted manual measurements on this print of shot lengths and sizes, point of view (POV), the camera angles, various types of movement and recurring motifs. Petrić counted 1775 shots, as opposed to the 1782 arrived at in the Digital Formalism project. The difference is also linked to the varying definitions of the boundaries of the shot, as they affect the way dissolves are dealt with.

The foundation of his formal investigation is nonetheless the division of the film into superordinate and subordinate narrative sections, for: "The segmentation of a film in which narrative development is not conceived as the basis of its thematic structure can be nothing but arbitrary" (Petric 1987: 73). The superordinate segmentation of the narrative filmic structure comprises four parts: the prologue, the first and second parts and an epilogue. These are, in turn, divided into a total of 55 sequences, for which Petrić lists the number of shots, the totals by frame and the running time in minutes and seconds (at a projection rate of 18 fps). According to our current knowledge, however, the film ought to be projected at 22 fps. There is then a precise description of each individual shot, in which, alongside a short synopsis, shot size and frame count per shot are recorded. Petrić's commentaries also make for very informative reading, as they make references to the historical circumstances of production or contain specific observations regarding content. Petrić, however, does make mistakes, for example, his supposed recognition of Vertov himself as one of the chess players at the end of the film.

Petrić goes far beyond a pure measurement of the film; rather, he analyses the film by means of his formal observations (also Lawton 1978). In so doing, he defines the POV as an important category. In a narrative film, it is usual for the public to be informed as to the vantage point of the camera, as it films either from the perspective of a character or from that of a narrator. In a traditional documentary film, however, the POV is almost always that of a superordinate narrator. According to Petrić's analysis, however, it is possible to determine that in *Man with a Movie Camera*, the POV switches between several different perspectives, principally between that of a narrator and a (subjective) cameraman (Petric 1987: 119). In order to be able to annotate the different perspectives, Petrić begins by defining six categories: third person (author's) POV, cameraman's POV, diegetic camera's POV, editor's POV, character's POV and ambiguous POV. In the appendix, Petrić apparently used a still earlier version of this

scheme. Instead of the category ambiguous POV, he chose the term self-referential POV (SR), actually a more explicit naming. He does not, however, attribute every shot to a category, but does so only when it seems meaningful and possible. Petrić subsequently determines that *Man with a Movie Camera* contains a similarly high proportion of shots with a cameraman's POV and an editor's POV. Adding up these two amounts gives a result matching the count of shots indicating a third person POV. According to Petrić, this leads to the viewer being confronted with a balanced relationship between opposing perspectives, simultaneously confirming and challenging the objectivity of human perception (ibid. 1987: 127). By contrast, there are a significantly smaller number of shots representing a character's POV.

The specific use of the POV in *Man with a Movie Camera* is for Petrić evidence of the film's experimental character and its distance from the conventional documentary film:

> Point of view is an essential structural component in The Man with the Movie Camera: it acknowledges the extent to which Vertov's film departs from traditional filmmaking as well as from conventional documentary film. The interaction of the three self-referential points of view (the camera's, Cameraman's, and Editor's) with those of the third person and the various "characters" generates a unique distancing effect sustained throughout the film. At the same time, this causes a shift of the viewer's perception from objective to subjective, with recurrent emphasis on the cinematographic creative process. (Ibid.: 28)

According to Petrić, Vertov's method is thus also in harmony with the *kinoglaz* concept, as in this way the film technique permits the public a multi-perspective view of "life as it is". For it was not the photographic illustration that was most important to Vertov but the privilege of being able to observe reality more profoundly than conventional observation allows (ibid.: 128).

Petrić likewise deals intensively with the pictorial composition of *Man with a Movie Camera*. In this area, he defines three main characteristics of image design implemented by Vertov and Kaufman: the contrast between black and white, the dominant graphic pattern and the more or less abstract camera angles (ibid.: 131). According to Petrić, most shots are not balanced in their division into black and white, but the contrast is often heightened or altered within the shot by the choice of camera position, such as when Kaufman climbs up a metal structure or when a traffic signal is photographed against the grey sky. Similarly, the use of unconventional camera angles results in an increased contrast in the image, for example, when the train seems to drive over the camera. For Petrić, the creative cameraman's work also includes a number of other methods of pictorial design, arrived at with the aid of special film techniques, that may be analysed. Petrić discusses split screen, double exposure, dissolves and "picturesque images" at length, which for Vertov were not just interesting optical effects but also filmic processes which delivered messages by means of the techniques used (ibid.: 132).

The visual design of *Man with a Movie Camera* rests, according to Petrić, principally on three fundamental graphic motifs: the circle and vertical and horizontal lines. These forms, however, are not arrived at by means of painstaking selection of the objects filmed but by selection of the appropriate framing and the contrast with other design elements. At the film's highlights, all three graphic motifs then func-

tion as "a pictorial composition of multiple crossing patterns without any single form being dominant" (ibid.: 135). As an example, Petrić mentions the sequence in which music is seen to be made with spoons and bottles, as well as the combination of a woman's face and a spinning wheel by means of double exposure.

Graphic abstractions appear most often when objects or people are positioned very close to the camera and are therefore photographed out of focus. These can thus, according to the author, be attributed to Kaufman's meticulous camerawork. For Petrić, incidentally, the roles within the film crew are clearly divided, as far as the design of pictorial composition goes:

> The variety of graphic patterns, visual designs, and, especially, their kinaesthetic interaction ought to be credited not only to Kaufman, who photographed most of the film's footage, but also to Svilova, who edited the shots in such a way that their formal features are instantly perceptible either by the contrast or similarity between the juxtaposed images. But it was Vertov who conceived the overall formal structure of the film, with the ultimate goal of demonstrating the medium's unique visual capacity. (Ibid.: 137)

A few remarks about the manipulation of time or the photographic technique used in the images are annotated for the appropriate shots by Petrić without further categorisation or any claim to comprehensiveness: "acceleration, slow motion, reverse motion, freeze frame, flipped over, stop motion, pixilation, overlapping, dissolve, double exposure, superimposition, fade-in, fade-out, split screen, compound/ composite shot, tilted frame, iris, mask, panning, tilting, tracking, craning" (Petric and Reeder n.d.: 314).

To a certain degree, Petrić deals with recurring motifs and patterns and notes a total of 71 recurring motifs for the appropriate shots. They may be taken from the Appendix. There is a mixture of formal and content notes, for example, locations such as the bus garage or the liquor store are noted but together with them also processes such as split screen or the category "diagonal piano keyboard"; people are listed in a specific context, such as "Svilova bulb" or "dancer with white dress and pearls". These motifs each appear at least twice but often as many as ten times. Petrić, however, does not follow these categories systematically in the annotation, but in Constructivism in Film places an emphasis, alongside the analysis of the pictorial composition, on the registration of the types of object movement and their possible function in the film's structure.

Film Is the Art of Taking Time: The Cinemetrics Project

For Yuri Tsivian, editing is the only artistic process which was born and further developed in the film medium. In his article "What is Cinema?" he regards film as a quantifiable art form, while the text is at the same time a convincing plea for a consistently formalistic approach in film analysis (Tsivian 2008: 765). Tsivian

advocates a more systematic and precise approach to film scholarship, expounding on this with statements about cutting rates:

> While debates about fast vs. slow cutting rates are central to the history of film, the notions of fast and slow will be of little use unless we have an idea of the normal. Distinct from the film critic, the student of film history cannot afford to rely on intuition, for […] the sense of cutting speed changed depending on when, where and by whom this or that film was made – saying nothing of different norms intrinsic to different genres. It is for this reason that an increasing number of film scholars resort to numeric data about cutting. (Tsivian 2009: 94)

Even though film scholarship knows much about the theory of montage (mainly in the context of the 1920s in the Soviet Union), the subject is usually dealt with using a few examples that have become famous. Tsivian sees the reason for this in the conventional methods of research and even in a certain reservation towards studying film in a quantitative way:

> Studying editing is not an easy matter. Editors are like tailors; before they cut, they measure. Footages and meters are staples of cutting-room talk. In this sense editing can be said to be an exact art, and not every student of film history is ready or eager to masquerade as a scientist. In addition, film scholars are more used to working at a desk or in a film viewing hall than they are at an editing table provided with a frame counter. (Ibid.)

Instead of an analogue viewing table with a frame counter, which is part of a film archive's basic equipment, on his website, Tsivian offers digital tools for measuring shots, and, additionally based on this, categories such as shot size or self-chosen parameters by which further to annotate shots. Since November 2014, there has been an alternative to the previously available software, which may still be downloaded, enabling online measurement of films to the precision of a frame. The FACT (Frame Accurate Cinemetrics Tool) enables a significant improvement in the quality of data and is continually being further developed.

Researchers can make annotations available in a relatively simple form by uploading the data they have gathered to the online database. Simple filter options assist in searching by film title, director, country of production or year of release. The metadata is naturally dependent on the diligence and professional knowledge of the contributing person, and the quality of the data is – as in all databases – subject to improvement. Tsivian's project is nonetheless certainly the most actively used of its kind and an excellent example of crowdsourcing within a group of experts. Potentially, significant results could thus be obtained, amenable to further statistical evaluation. The success may also be expressed in figures: in 2006 (shortly after the platform went live), there were 150 entries (ibid.: 99); now – 10 years later – there are over 15,000 films, encompassing every genre and type. Even taking into account films with more than one entry, those that are only partly annotated and errors, the figure remains impressive.

Alongside the visualisation of shot lengths, Cinemetrics offers – and this is a special feature compared to other annotation programmes or editing recognition software – basic statistical calculations. Theoretical contributions under the heading "Measurement Theory" also help with work on the data, beginning with Barry Salt's

articles, through information on statistics for film analyses, to case studies. At the end of the list, a comprehensive bibliography on statistical film analysis may also be consulted. Supplementary mention ought here also to be made of Warren Buckland's and Thomas Elsaesser's book *Studying Contemporary American Film: A Guide to Movie Analysis* (2002), as well as Charles O′Brien's article (2005) "Multiple Language Versions and National Films, 1930–1933. Statistical Analysis".

The basis for analysis is in each case the length of shots and the average shot length (ASL) that results and which can be read and calculated fairly simply for each film on the website itself. The ASL is achieved by calculating the average length of shots in seconds and then dividing the total length of the film by the number of shots. In this way, it is possible to compare films by their editing methods, for example, how often cuts occur and how long the shots are. A high ASL thus means that on average, the film contains longer shots with fewer cuts. Tsivian points out, however, that not only the average value for shot length may be considered, if one wants to deal with the rhythm of a film: "ASL data works, but we need to keep in mind that these data are relational. It is useful to know how long the average shot length of a film is compared to figures obtained for other films, but ASL can become misleading if you treat it as an index of the film's dynamic quality". (Tsivian 2009: 95)

In order to portray the dynamic behaviour of a film, Cinemetrics offers red trend-lines within visualisations that are otherwise black and white. Tsivian offers three possibilities for this: "Cinemetrics specifically tells us about the film's cutting swing (standard deviation of shorter and longer shots from ASL), its cutting range (differences in seconds between the shortest and the longest shot of the film) and its dynamic profiles (polynomial trendlines which reflect fluctuations of the shot lengths within the duration of the film)" (ibid.: 96). In principle, the rhythmic design of a film is here defined by the relationship of the shot lengths to each other, a simple and meaningful step, though only a first one, towards making statements about the rhythm.

Visualisations of Vertov's Film in Cinemetrics

The collaboration with Tsivian had already begun during the Digital Formalism project, with the aim of obtaining a frame-accurate visual illustration of *Man with a Movie Camera*, which could not have been achieved with the Cinemetrics software, despite brave attempts to do so. Even with the highest concentration, the human eye cannot register the rapid cuts of the film and – what is of still greater significance – manually translate fast enough in real time. For two films, *Man with a Movie Camera* and *The Eleventh Year*, the data I had annotated in Anvil was made available as an Excel list. The former was also the subject of an exhaustive film-historical discussion, in which Tsivian, Barbara Wurm and I participated (Heftberger et al. 2009). All other Vertov's films that were subsequently represented have only recently been measured using FACT. Each film was represented in its totality, without consideration of the individual reels. Subsequent to the visual representation, I

would like to make some remarks about their use but also to reflect on the reasons that for my purposes the calculated ASL values cannot be expedient.

With the aid of Cinemetrics, the annotated shot lengths for eight of Vertov's feature-length films and *Kinopravda No. 21* were visualised as graphs in chronological order (Figs. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, and 5.9). In contrast to the conventional mode of representation (Korte, e.g. comes to mind), the lines run from above to below. Tsivian explains this as follows:

> In the world of statistics, we are more used to quantitative values being arranged bottom up, not top down. For instance, if your graph represents the daily fluctuation of the euro against the dollar, a European statistician will more likely arrange the euro values along the bottom of the table to show off proudly how strong this currency grows each new day [...] Likewise, if we were interested in the SLOWNESS of film editing it would make sense to align shot lengths along the bottom of the graph [...] The reason why we use "stalactites" instead is because we are interested in SPEED rather than slowness, in CUTTING RATES rather than shot lengths per se.[5]

The shot lengths are represented continuously in the graphs from left (the beginning of the film) to right (the end of the film) in Figs. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, and 5.9. The red line in the middle of the graph represents the trendline which visualises whether the cutting rate increases or decreases over the course of the film. For a short discussion of the results, an overview of the ASL provides a summary. I am initially omitting information about the number of shots, as more precise figures, verified from the film prints, are presented in the Digital Formalism project.

Film	ASL (s)	Trendline
Kino-Eye	4.0	Decreasing
Kinopravda No. 21	5	Rising
Stride, Sovet!	4.2	Rising
Sixth Part of the World	4.5	Decreasing
The Eleventh Year	4.0	Constant
Man With A Movie Camera	1.6	Rising
Enthusiasm	6.7	Decreasing
Three Songs of Lenin	4.8	Rising
Lullaby	5.5	Rising

If we turn to the outliers at both ends of the spectrum, it is not very surprising that *Man with a Movie Camera* has the shortest average shot length. The highest value is to be found for *Enthusiasm*. But before we jump to conclusions too quickly on the strength of the ASL calculations, we should look more closely at the graphs. In my opinion, the Cinemetrics visualisation of *Man with a Movie Camera* may be taken as the point of departure for all further considerations of the structure of Vertov's films. This is the work in which the director was able to realise his vision most

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[5]Commentary on the film at the Cinemetrics website: http://cinemetrics.lv/movie.php?movie_ID=1780. Last accessed 18 Aug 2018.
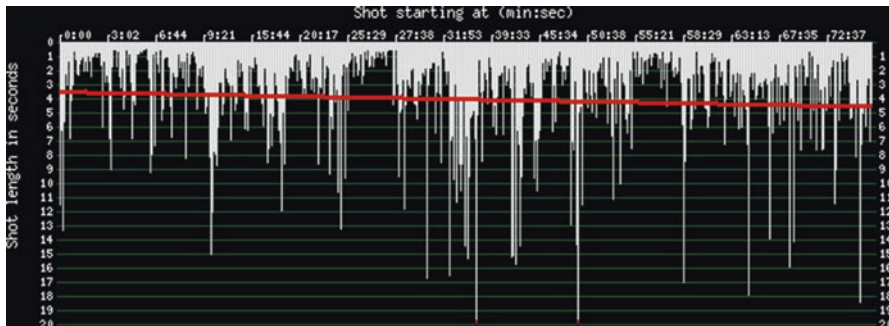
Fig. 5.1 Shot lengths in *Kino-Eye*

Fig. 5.2 Shot lengths in
Kinopravda No. 21
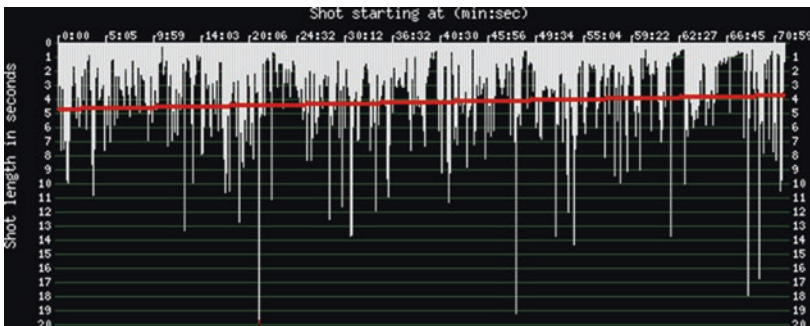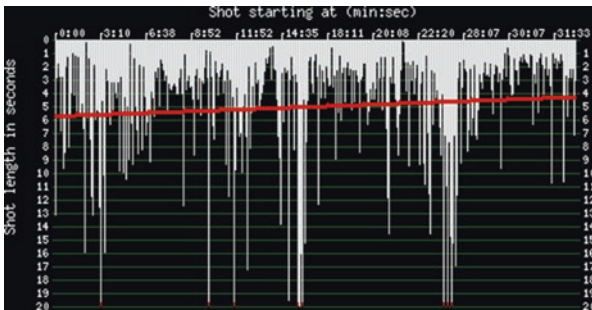
Fig. 5.3 Shot lengths in *Stride, Soviet!*

Fig. 5.4 Shot lengths in
Sixth Part of the World
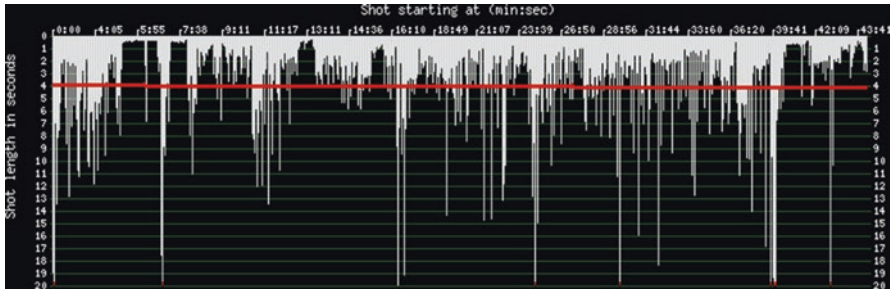
Fig. 5.5 Shot lengths in *The Eleventh Year*
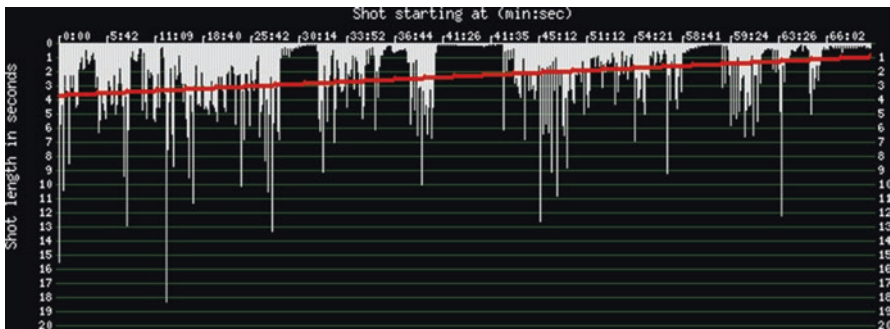
Fig. 5.6 Shot lengths in *Man with a Movie Camera*
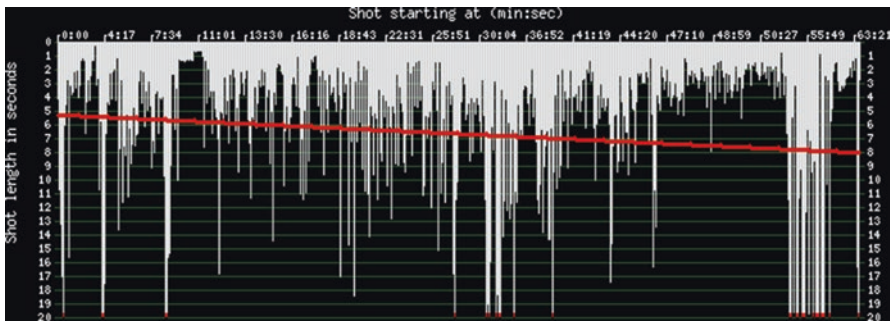
Fig. 5.7 Shot lengths in *Enthusiasm*

clearly. Apart from that, we may assume that the film has been preserved in complete form, which has a bearing on further discussion. The graph shows "valleys" appearing at periodic intervals, indicating an increase in the editing rhythm, until at the end the cuts during the big finale until the final title can scarcely be separated from one another. Vertov more or less consistently follows this pattern in all his feature-length films in the period under consideration.
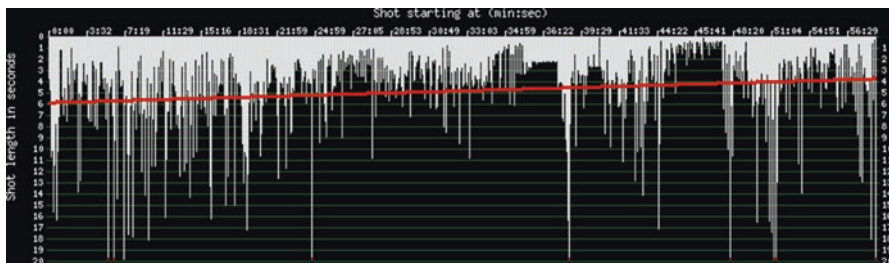
Fig. 5.8 Shot lengths in *Three Songs of Lenin*
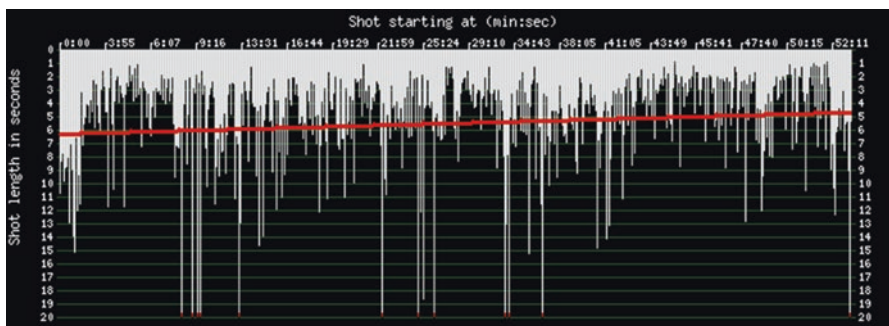
Fig. 5.9 Shot lengths in *Lullaby*

What I have called "interim finales" are more strongly marked to varying degrees, which correlate on the one hand to the subject of the film and on the other to the period of its production. I think, however, that a constant intensification of this process from *Kino-Eye* to *Man with a Movie Camera* can be read. The two last films, *Three Songs of Lenin* and *Lullaby*, also both retain this pattern, though in a far weaker form. Vertov no longer edits in single frames but in principle designs his shots to be somewhat longer. And, apart from two formally very conspicuous sections in *Three Songs of Lenin* (of which more later), the editing rhythm remains a rather even one.

Vertov also structures his finales according to certain formal considerations. Once more, it is *Man with a Movie Camera* that can be adduced as the – in Birett's words – normal film, in which the "montage battle" is fought at its purest. The other works do not end in such a pyrotechnical manner, although *The Eleventh Year* already shows signs of periodic increases in speed – although the end is missing (of which, again, more later). In any event, and this is the most important finding of these observations, *Enthusiasm* is the exception. From the 50th minute, the arrangement of shot lengths does not adhere to any pattern familiar from the other graphs, with many long shots following one another. In my opinion, this strengthens a suspicion that unmistakably arises from repeated viewing of the film that from a certain point in the preserved print the film is no longer in its original condition, existing in

a mutilated state. It is only when depicting the film in graph form and, above all, when looked at together with the relevant works that observations such as these can be made and substantiated. Research on this point is still pending or is perhaps not possible due to the lack of documentation in the archives.

Detailed Study of Man with a Movie Camera

In his many writings on Vertov, Tsivian has not only illuminated the films' cultural-historical context but has increasingly tried to use formal and statistical tools to analyse their formal structure. For Tsivian, too, *Man with a Movie Camera* has served as a textbook example for the study of Vertov's editing procedures. His two most important publications specific to the film are "Einige Überlegungen zur Struktur des Films Der Mann mit der Kamera" and "Man with the Movie Camera, Reel One. A Selective Glossary". The methodological and theoretical preliminary considerations had already been worked out in the 1970s by Salt, for whom they were a means of understanding not only the individual style of a director but also trends within film history.

Tsivian strives to integrate the natural, material-dependent systems of a film into the annotation and analysis, for example, recording the individual reels of approximately 300 metres in length, which for Petrić, in his investigation, was not of relevance. This also has to do with an increasing sensibility for this subject in film archives, as well as among film historians and scholars. It is only upon returning to the film print and studying the material that one obtains significant indications of the original structure and, linked to this, the practice of projection. As in the early years, two projectors were not usually available in order to screen with a changeover system, the change of reels created a small pause. Directors thus often marked the beginnings and ends of reels with title cards, such as "End of the first act". For *Man with a Movie Camera*, Vertov used falling and rising numbers; in *Kino-Eye*, he signalled the end of each reel with animation. These original boundaries between the reels unfortunately often fell victim to archive practice, the markings removed out of ignorance and several reels being spliced together in large film cans. It has, however, been possible to reconstruct the original demarcations between the reels which serve as the basis for all further research. The discussion about the divides between the reels of *Man with a Movie Camera* was one of the significant bases for the previously mentioned restoration of the film in April 2010 (Heftberger et al. 2009: 65). It is important, not only for that reason, to represent the individual reels in separate graphs (Figs. 5.10, 5.11, 5.12, 5.13, 5.14, and 5.15).

Additionally, the film *Man with a Movie Camera* is the object of several specific annotations that I developed in collaboration with Yuri Tsivian. Taking our lead from the categories I initially annotated in the Digital Formalism project, we introduced the following supplementary categories: shot size, camera angle, motion type and POV. The shot sizes are divided into the following categories (Fig. 5.16): (1) extreme close-up (ECU), yellow; (2) close-up (CU), orange; (3) medium close-up
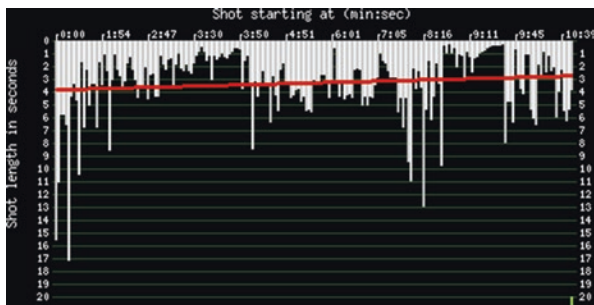
Fig. 5.10   Shot lengths Act 1 in *Man with a Movie Camera*
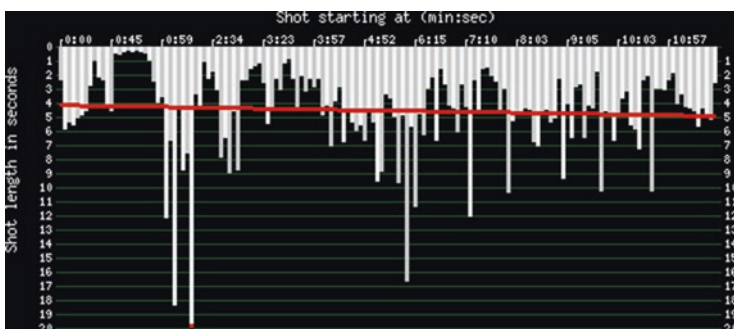
Fig. 5.11   Shot lengths Act 2 in *Man with a Movie Camera*
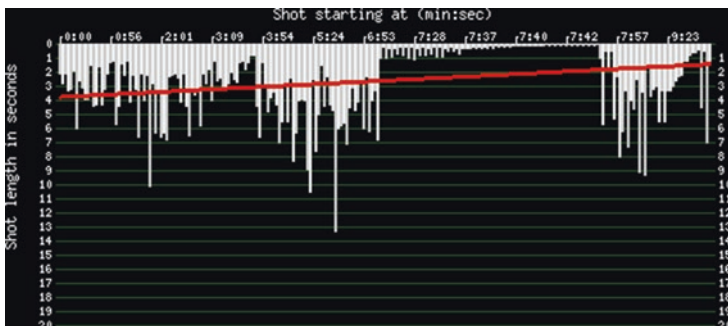
Fig. 5.12   Shot lengths Act 3 in *Man with a Movie Camera*

(MCU), red; (4) medium shot (MS), pink; (5) medium long shot (MLS), purple; (6) long shot (LS), turquoise; (7) extremely long shot (ELS), green; and (8) irrelevant, white. Cinemetrics permits a maximum of eight categories, which entails a certain limitation. This figure matches the categories used on the website and can be understood there. Black frames or intertitles are examples of the shots categorised as irrelevant. Among the sources we consulted for the selection were

Fig. 5.13 Shot lengths Act 4 in *Man with a Movie Camera*
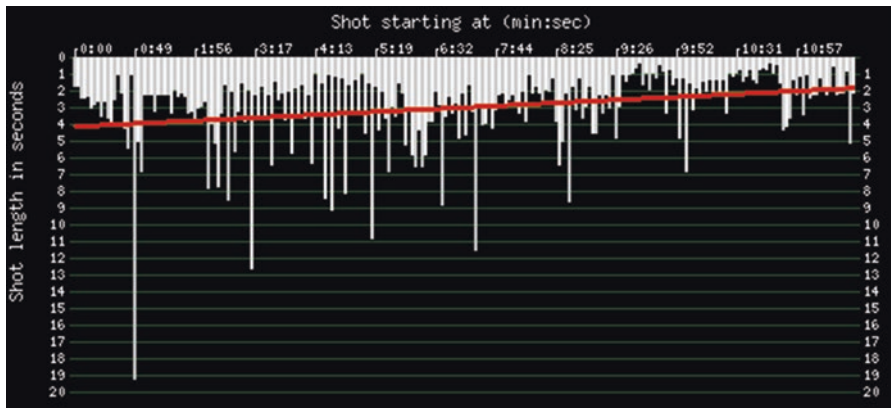
Fig. 5.14 Shot lengths Act 5 in *Man with a Movie Camera*
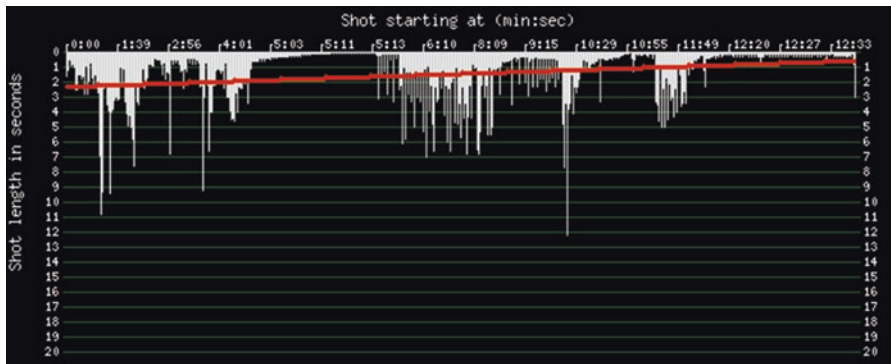
Fig. 5.15 Shot lengths Act 6 in *Man with a Movie Camera*

Fig. 5.16 *Man with a Movie Camera*: "shot size"

Fig. 5.17 *Man with a Movie Camera*: "camera angle"

texts by Petrić and Boris Ėjchenbaum. Ėjchenbaum's suggestions partly overlap with Petrić's categories: composition of the film frame (static shot), shot size, change of perspective (regressive and progressive), shot length, demarcation of film periods and film intervals, movement within the shot, use of unusual perspective, unusual temporal process (time lapse, slow motion), visible montage, linkages and POV (Ėjchenbaum 2005 [1927]).

The camera angles are divided into normal view, high angle, low angle and irrelevant (Fig. 5.17): 1. normal angle, yellow; 2. high angle, orange; 3. low angle, red; and 4. irrelevant, pink.[6]

A further distinction is made according to the type of movement; the most important differentiation characteristic is the kind of movement and by whom it is executed. It could, for example, be an object, a person (given as "normal/natural") or the camera. The annotation also includes the speed at which the movement is carried out (Fig. 5.18): (1) no motion (NM), yellow; (2) freeze frames (FF), orange; (3) slow motion/camera (SMC), red; (4) normal/natural (NormalN), purple; (5) fast/natural (FastN), turquoise; (6) fast motion/camera (FastC), green; and (7) black frames, intertitles, 1-frames (BF), white. The eighth category slow motion/natural

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[6] Irrelevant here means black frame or intertitle.

Fig. 5.18 *Man with a Movie Camera*: motion type
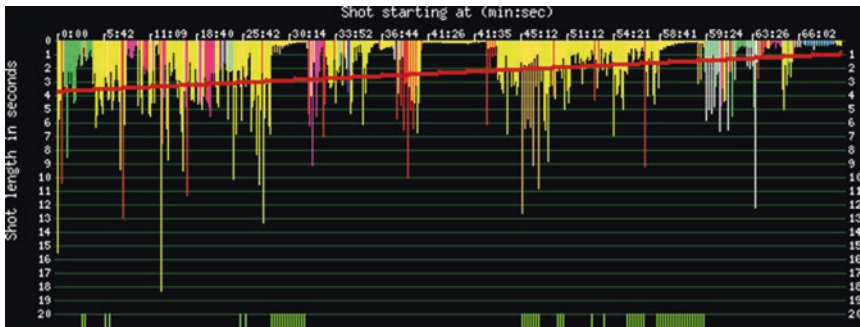
Fig. 5.19 *Man with a Movie Camera*: POV

(SMN), though annotated, was not included in the Cinemetrics graph by Cinemetrics administrator Gunars Civjans, by oversight rather than intention.

The categories for POV have been determined and represented in a similar manner (Fig. 5.19). In each case, the shot that is listed is that in which a person (or persons) occupy a clear position; in "shot showing the film theatre", for example, this refers to the conductor or cinema projectionist. Apart from that, the gazes of others upon Kaufman and Svilova are annotated. No POV was initially designated as unmarked POV, which better conveys the meaning that there is no clearly assignable direction of gaze, no clearly assignable position of a character, of Kaufman, Svilova or the public in the cinema. The individual categories are summarised in the complete list: (1) no POV (NoPOV), yellow; (2) character POV (CharPOV), orange; (3) shot with Kaufman (Kauf), red; (4) shot from Kaufman POV (KaufPOV), pink; (5) shot wth Svilova (Svi), purple; (6) shot from Svilova POV (SviPOV), turquoise; (7) shot showing the film theatre (MovThea), green; and (8) shot from the audience POV (AudPOV), white.

Of particular interest here are the shots with character POV, indicated by the green markings in the graph below. In these, I have inserted interactive stills from the film. For Tsivian, the character POV is best defined by Vertov first indicating the

Fig. 5.20 *Man with a Movie Camera*: character POV

persons/characters who are looking (face/eyes) and then, in the subsequent shots, showing the event through their eyes. The differentiation is not simple, and here we are by no means dealing with a completed investigation but with something envisioned as a test of the categories and as a hypothesising. I established a total of ten characters whose cinematographic dialogue clusters together at certain points in the film. Figure 5.20 contains sample images from the film.

What can such in-depth studies contribute to a better understanding (the formal design) of a film like *Man with a Movie Camera*? First of all, one must highlight the methodological preliminary work. The dialogical development of specific categories, for example, motion types and POV, as well as the use of general film-analytical parameters, sharpens the perception for the peculiarities of the film and incorporates these characteristics in the analysis. Even if the restriction to eight categories in Cinemetrics was not ideal, it does force the focus to what is of greatest relevance in the framework of the investigation. A discussion such as this can also stimulate to greater adventurousness in the annotation. Even if the use of standardised terms is unquestionably meaningful and desirable, the necessary hypothesising first requires the boldness to define significant parameters of individual cases independently. For example, the Digital Formalism project tried to use *The Eleventh Year* to develop a typology for Vertov's units of montage that would be systematically followed and described for at least one film (Heftberger et al. 2009a: 142).

The determination and visualisation of the divides between reels for *Man with a Movie Camera* stand, as already mentioned, for the materially accurate archive research providing information about the design of a film created in an era in which one had to take into account a pause for every reel change. It is not until this information needs to be brought to light that insights into the segmental design of a film are possible. In Vertov's case, the beginnings and ends of reels are clearly marked,

both semantically and visually (Heftberger et al. 2009: 65–66).[7] In the article "Man with a Movie Camera under the Lens of Cinemetrics", Tsivian submits the investigation's new findings and begins with the determination that, contrary to previous opinions, the film was edited with the idea of five interruptions in mind:

> We know that in order for the viewer not to experience these breaks as so many abrupt and unwitting interruptions, Vertov has bracketed the reels with corresponding numbers "rising" at the beginning of a reel and "falling back" at its end; and we know that alongside these kinetic-numeric brackets there appear to be other visual means to say to the viewer that each consecutive reel is both a whole in itself and a part of a larger whole. (Ibid.: 67)

In this article, advanced cognitive considerations regarding the design of the visual reel cues are arrayed, which – also in tandem with cross-references to other Vertov's films – could be valuable impulses for possible supplementary studies on visual rhythms. A relevant observation is the fact that all reels apart from the beginnings of reel 5 and reel 6 are indicated with an image relating to film-making, for example, a camera lens, film stock, the camera mounted on Kaufman's motorcycle. This break with regularity could be analysed with a view to a poetic technique, opines Tsivian, according to which a pattern which has been consistently introduced must repeatedly be interrupted, "for, paradoxically, if a poem is fully consistent with a chosen pattern of regularities, it becomes predictable, and its very consistency loses its impact".[8]

The representation of the individual reels in Cinemetrics enables one, first of all, to look selectively at each reel and its ASL. This results in the following values, listed here for the sake of completeness: reel 1 (ASL 3.3 sec.), reel 2 (4.5 sec.), reel 3 (2.6 sec.), reel 4 (1.5 sec.), reel 5 (3.0 sec.) and reel 6 (1.4 sec.). At first sight, it is evident that reel 2 has the longest average shot length and exhibits a descending red trendline. The interactive discussion led to the hypothesis that by contrast to the other reels, reel 2 is "event-driven" (ED) in its editing (Heftberger et al. 2009: 77), which manifests itself in the longer shot lengths: "There must be a rule, let's call it the ED-rule of editing, in compliance with which editors tend to cut fast shots faster". At the same time, however, Tsivian adds that further research is required in order to prove such a presumed dependency (ibid.). He takes this film as an opportunity to produce a dependence between the motivation for the editing and motion within the image. These considerations led to the annotation of motion types, which was carried out with self-chosen categories. In summary, one could say that the specific annotations for *Man with a Movie Camera* on the one hand brought specific realisations about the film, and on the other, they stimulated methodological and film-scientific investigations. Beyond that, the visualisations of Cinemetrics are available for other interested researchers.

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[7] The relevant frames are used here as illustrations.

[8] http://cinemetrics.lv/movie.php?movie_ID=1780. Last accessed 18 Aug 2018.

The Eleventh Year and In the Shadow of the Machine: A Work Report from the Archive

It is known from the preserved documents that the film *The Eleventh Year* was the subject of fierce controversy. Albrecht Viktor Blum's German "Kulturfilm" *In the Shadow of the Machine* aroused great anger in Vertov. In temperamental manner, he made clear in an article in the *Frankfurter Zeitung* on 12 July 1929 that neither Ruttmann nor Blum were either theoreticians or practitioners of the documentary film and objected to *The Eleventh Year* being labelled a plagiarism of Blum's film. It was Blum, rather, who had taken whole passages from Vertov's film and inserted them into his compilation film without alteration. He here emphasises that the *kino-glaz* concept had already come into being in 1918 in Russia, and the films had been constructed as symphonies of labour, the Soviet state and the city.

The German director was quite frank; in a response to *Die Weltbühne* on 6 August 1929, Blum granted that he had used excerpts from Vertov's film *The Eleventh Year* and from *Zvenigora* (1928, Aleksandr Dovženko) in his own film. He then explained that the reasons for his prior reticence about this fact would only be given on request. He had taken 86 metres from Vertov's film "as a completed montage complex with only very slight alterations" (Tode and Gramatke 2000: 25). As Thomas Tode rightly (2009: 11) determines, the interventions in the material remain unmentioned in the form of intertitles.

The first indications that pieces of *The Eleventh Year* are preserved in Blum's film, and which ones, solidified through a close reading of *In the Shadow of the Machine* at an editing table, in the framework of the Digital Formalism project. Above all, the film's finale is strikingly reminiscent of Vertov's formal procedures, in addition to which, certain motifs are unambiguously recognisable. These observations and realisations were comprehensively set out in the form of a video essay (Heftberger et al. 2009b). Thus, for the first time, a sound argument was put forward for the missing end of Vertov's film, which is at least partly present in Blum's film. This practice, incidentally, was quite common – it is even possible that the production company itself sold material to interested parties abroad and consciously mutilated the original film in order to do so (Derjabin and Heftberger 2009: 12). The visual proof, if one may put it like that, is provided by my annotation of *In the Shadow of the Machine* in Cinemetrics (Fig. 5.21).

A typical Vertov finale, in which the images are edited to a rhythm growing constantly faster, is clearly recognisable. There are no indications earlier in Blum's film of any clear intermediate finale. Subsequently, the content of these images taken from the end of *The Eleventh Year* is also presented in the overview (Fig. 5.22). For those who know the film, it is immediately clear that one is dealing with motifs from Vertov's work.

Visualisations can, in this way, also be helpful in the solution of archival problems. Patterns typical of a director are presented in such a way as to be recognisable. Together with a visual assessment and possibly recurring content, conclusions regarding historical events can then be drawn from the sometimes very adventurous life cycle of a film print.
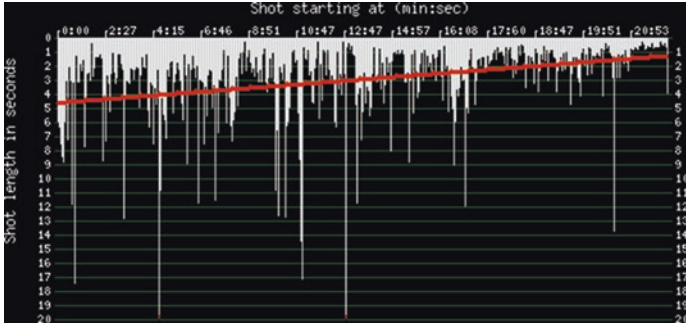
Fig. 5.21 *In the Shadow of the Machine*: shot lengths

Fig. 5.22 The finale from *In the Shadow of the Machine* is the lost finale of *The Eleventh Year*

Potential of the Cinemetrics Platform

The Cinemetrics Internet platform is still an important meeting and networking point for all who have an interest in statistical or – more generally expressed – quantitative film analysis and are also willing to contribute data themselves. It is also worthwhile reading the articles Tsivian has collected and made available online and browse the forum for interesting discussions or initiate one oneself. The labs function (Digital Laboratories) makes it possible to create, analyse and test more complex data sets. Tsivian describes this section as follows:

> We started with a large-scale comparative chart which looks a little like a star map. It is a scatter graph, and each dot represents a film available on our database. Select areas by dragging a rectangle to zoom in and see better different areas of film history. Once you have found your film on this map you will see how it relates to thousands of other films on the x-axis of time (past 111 years of film history) and on the y-axis of average shot lengths[9]

What the founder of Cinemetrics is describing shows no less than the further development of a website primarily conceived for the collection of data, serving chiefly the visualisation of one's own contribution, into an integrated online platform. This now enables a multitude of ways of working with the collected data and the use of the comprehensive database in the context of the specific research interest. Tsivian and his colleagues have, in essence, created and sustained something revolutionary. The project thus enables, on the one hand, investigations spanning the history of film (synchronic statistics) and, on the other, individual studies (diachronic statistics), for example, on a director. A few years ago, Lev Manovich prepared a graph giving an overview for the former case, summarising the ASL for all films for which the data had by then been researched (Fig. 5.23).

The curved coloured lines represent trendlines visualising the cutting rhythms of films from the years 1900 to 2008; productions from the USA, France and the Soviet Union, but naturally the films produced by all represented countries could be depicted analogously. Figure 5.24 is again an example for the visualisation of the ASL of the Vertov's films I annotated in Cinemetrics Labs.

One should not, however, ignore weaknesses in Cinemetrics. These have to do, first of all, with the method of data acquisition. The measurement in minutes and seconds, rather than in film frames, is due to the technical circumstances and the fact that most of the material is accessed in DVD format, and in studies for quantitative film analysis, this is unfortunately more often the rule than the exception. For the precise quantification and comparability of analogue prints (especially from the silent film era), this is naturally not ideal. For the respective research project, it must be checked whether this procedure can be accepted.

The contributors typically do not have more precise details regarding playing speed or – and this is arguably still more important – the source of the video in question. Often, and this would already be a further methodological problem, not even the most minimal metadata is entered, such as director, country and year. This makes it more difficult to locate, compare and discuss entries. Not all Cinemetrics users are also trained in cataloguing, but Cinemetrics could certainly define some fields as obligatory. The new possibility of providing a link to the IMDb (Internet Movie Database) is praiseworthy but falls short and is often unhelpful for titles that are either rare or not American, as the data is either not available or contains errors. More cooperation with film archives would be conceivable here, but it is still only a vision of the future. And even if a matching of data was the optimal course of action, it would be sufficient if there were more consciousness in film studies circles for categories such

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[9] http://www.cinemetrics.lv/lab.php?ID=119. Last accessed 18 Aug 2018.
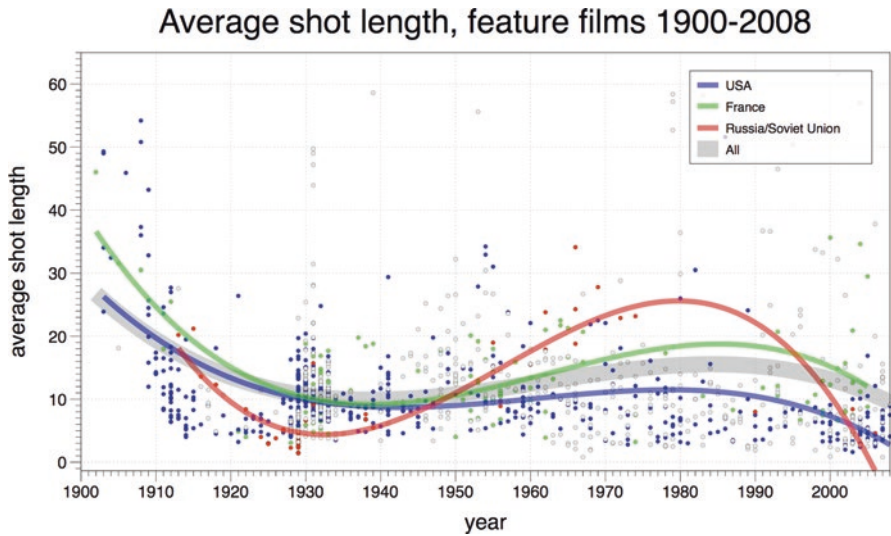
Fig. 5.23 Lev Manovich's graph representing all Cinemetrics ASL

Fig. 5.24 Cinemetrics Labs, ASL of all Vertov's films comparing all datasets (status as of April 2015)
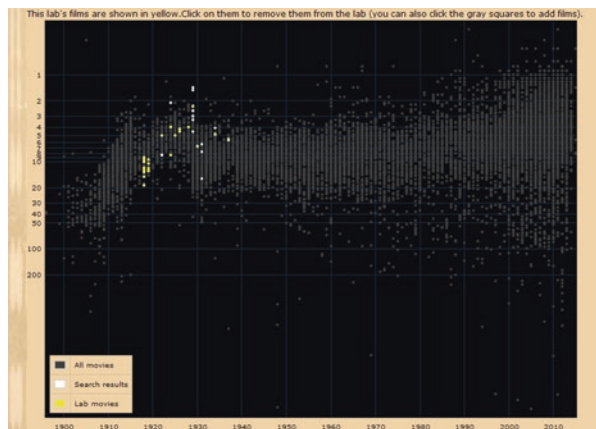
as a film's original title and information about extant prints, as is taken for granted in film archives. Cinemetrics could make an educational contribution and reach many (young) people.[10]

It is additionally to be regretted that Cinemetrics offers no visual orientation assistance for navigating the film via the visualisation. That would enable one immediately to see what was happening in the longest shots. The reasons are obvious that would require videos to be uploaded to the online platform, which, apart from the problem of rights, would also mean cost-intensive hosting of the data.

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[10]Tsivian is aware of this deficiency, cf. the discussion on the Cinemetrics website: http://cinemetrics.lv/topic.php?topic_ID=373. Last accessed 18 Aug 2018.

Linking to existing video sharing websites, such as YouTube or Vimeo, would, however, be conceivable. In the currently available form, the visual link to the film is lost with the entry of the data and the resultant appearance of the graph, i.e. it is difficult to navigate directly to individual shots in order to record their content. This reduction of information is not peculiar to Cinemetrics but is endemic to academic publications on film and is continually mentioned as an obstacle. In the next chapter, I will deal with forms of representation that wish to maintain this reference.

Visualisations Without Reduction

In his article about the questions of visualisation, Manovich states that, since its inception in the latter half of the eighteenth century, the practice of visualising information rests on two principles: reduction and the use of spatial variables (Manovich 2010). At the heart of the following chapter is the fact that complex issues must often be reduced for visualisations. In his retrospective look back at the history of visualisation, Manovich observes that the especially interesting data was overwhelmingly presented in topological or geometric form and that this is still the case. Other less important characteristics were then often represented through the use of colour gradations or shadings. According to Manovich, this is true not only for graphs or bar charts but also for visualisations of networks. For current examples, he refers one to the website "www.visualcomplexity.com", which lists a large number of such projects.[11] To date, none of these projects has dealt with film data.

In his projects in the area of media, Manovich attempts to break up this principle of reduction and to develop new visualisation forms that are richer in information. With the aid of dots, lines, curves and other geometric forms, it is true that one may represent all kinds of objects and their relationships with relative simplicity, regardless of whether one is dealing with people, share prices, pollution or works of art. This, on the one hand, is the great advantage, but on the other, one must take into account that things must be radically schematised. This tendency to reduction has a parallel development in other sciences, which Manovich locates in the first half of the nineteenth century:

> Physics, chemistry, biology, linguistics, psychology and sociology propose that both natural and social world should be understood in terms of simple elements (molecules, atoms, phonemes, just noticeable sensory differences, etc.) and the rules of their interaction. This reductionism becomes the default "meta-paradigm" of modern science and it continues to rule scientific research today. For instance, currently popular paradigms of complexity and artificial life focus our attention on how complex structures and behaviour emerge out of interaction of simple elements. (Manovich 2010)

The following visualisation has, to begin with, no film work as its object and is intended as an illustrative example of how non-reductionist visualisations could look in principle. ImagePlot was developed by the Software Studies Initiative, with

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[11] http://www.visualcomplexity.com/vc/. Last accessed 18 Aug 2018.
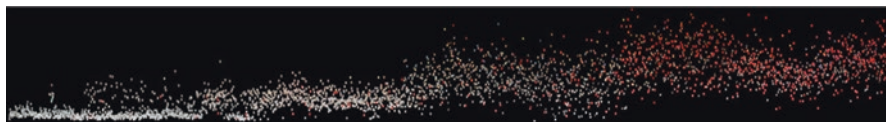
Fig. 5.25 All *Time Magazine* covers between 1923 and 2009
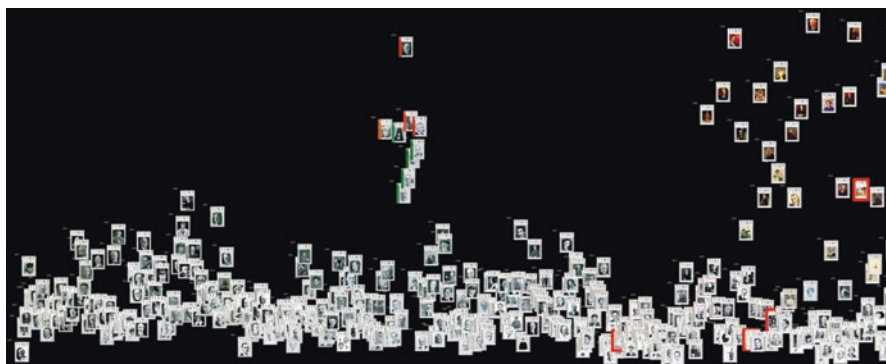
Fig. 5.26 Zoom in on the visualisation of the covers of *Time Magazine* between the years 1923 and 2009; the gradual replacement of black and white layouts by those in colour can be seen

support from the National Endowment for the Humanities (NEH), the California Institute for Telecommunications and Information Technology (Calit2) and the Center for Research in Computing and the Arts (CRCA).[12] ImagePlot is an open-source software enabling the processing of images and their subsequent organisation according to their visual characteristics and metadata. The data can then be arranged in chronological form, similar to a curve chart. All cover images from the American periodical *Time Magazine* were digitised and presented on a timeline spanning the years 1923 to 2009. The cover pages were entered on the x-axis in chronological order, while on the y-axis, they were arranged according to their brightness (for black and white images) or their saturation (for colour images) from bottom to top (Fig. 5.25).

Naturally, with graphs of this type, the choice of detail is a significant factor in information yield. As in traditional, paper-based, publications no interactive enlargement or reduction in the size of the visualisation is possible, one is deprived of one of the most important characteristics. In the work before us, therefore, a supplementary detail view of the same graph can help, if necessary, to facilitate comprehension (Fig. 5.26).

It is not without good reason that Manovich and his team work in Calit2 with enormous monitors, the so-called HIPerSpace Visual Supercomputers. All visualisations presented in this book must be understood against this background and in

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[12]For further information cf. http://lab.softwarestudies.com/p/imageplot.html. Last accessed 18 Aug 2018.

paper form can only remain an approximation. Visualisations of this kind generate the image information for the data in its entirety, making it then available for analysis in its totality and formal design. For Manovich, such a visualisation exposes lines of development and conventions that would not be visible in individual analysis. In the case before us, it is relatively easy to understand the change in design.

> This visualization shows that brightness and saturation of Time covers published over 86 years follow a cyclical pattern of rising and falling, with dramatic peaks and valleys only becoming apparent over periods of a decade or more. Standing apart from the overall curve are extreme exceptions: glowing bright images and pale designs that float above or below the cloud of covers typical of an era. The most saturated covers turn out to correspond to Cold War Era – they use lots of pure red to represent the Communist threat. We can compare the last decade (2000s) to the entire eighty-six year magazine history. The drop in saturation since the end of the 1990s echoes a somewhat similar period of unsaturated covers during the mid-1960s. (Manovich 2011)

Applied to film, this thesis can be formulated, above all, in such a way that unreduced visualisations can make visual rhythms visible at a glance. In general, film-academic research rests less on metadata from individual works, the researchers tending, rather, to develop their arguments from subjective viewing and often only from a single such viewing. There can be no objection to this in principle, but the justification of the result is surely easier when, for example, considerations regarding filmic rhythm can also be visually observed.

In the Digital Formalism project, the orientation was towards Russian Formalism, which was certainly stimulating and meaningful in terms of theoretical debate about rhythm but ultimately less fertile for concrete investigation. An attempt to define rhythm was undertaken with the result that rhythm can by no means be automatically detected. Rather, the semantic and the formal overlap and intertwine; the grasp of rhythm is "above all also an accomplishment of the capacity for association and anticipation of human perception, which transcends precise boundaries". (Kropf 2009: 114) This is also because no systematic studies of rhythm were developed in Russian Formalism. Certain statements by Ėjchenbaum or Tynjanov could, however, give direction to an analysis. Ėjchenbaum (2005 [1927]: 33), for example, writes that shot lengths are useful as a basic approach, but they must not be viewed in isolation. Tynjanov, too, speaks of an interplay between the stylistic and metric moments in the unfolding of the film. Not only the change of shots (i.e. the shot lengths) but also different photographic angles and lighting have their significance as stylistic features in marking the culminating sections (Tynjanov 2005 [1927]: 74). Complementary to Tynjanov, one could also add shot size. A further useful method would be to come closer to filmic rhythm via motion or patterns of motion within the shot, either manually annotated or generated with computer support. The manual annotation of types of movement developed in the project together with Tsivian enables such an investigation with the aid of Vertov's films. The original eight headings (no Motion, freeze frames, slow motion/camera, slow motion/natural, normal/natural, fast/natural, fast motion/camera, irrelevant) were later slightly modified for the work with Manovich, as one can see in the legend accompanying the following graphs.

An analysis of Vertovian rhythm is not the focus of this book, and yet the writings of the Formalists give valuable clues as to the type and content of desirable forms of visualisation. The basic framework for every filmic representation and investigation is the shot; episodes then constitute the unit in the next order of magnitude, and a reel embraces all episodes. Experiments with reduced visualisations, based on shot lengths, are followed by direct visual representations, in which the available pictorial information can finally give quite new impulses for analysis.

The Visualisation of Vertov's Filmic Structures

Shot Lengths

In the following visualisations, we remain relatively close to the traditional representations as at Cinemetrics. Each line represents one shot of the film, the duration indicated by the length of the line. The film progresses on the y-axis from upper left to right, displaying the total number of shots. By contrast, the x-axis shows the length of the shots. In the same way, several films can be entered into a diagram, enabling visual comparison of shot lengths and total shots per film (Fig. 5.27). The same form of representation is subsequently used for three different films (Fig. 5.28).

In graphs of this type, the distribution of long and short shots can be seen at a glance for the entire film. The experimental design of *Man with a Movie Camera*, compared with *Three Songs of Lenin* and *The Eleventh Year*, can clearly be seen; sections with extremely short shots alternate with blocks of longer shots. The shots towards the end of the film tend to be shorter; this applies especially to Vertov's early films. In addition, there are several very long shots in *Three Songs of Lenin* and *The Eleventh Year*, which depart markedly from the average shot length of the film and appear mainly towards the end. Apart from that, it is already possible to state that *Three Songs of Lenin* has a slower cutting rhythm than both the films with which it is here compared. In making such observations, an intimate knowledge of the film in question is naturally helpful, as meaningful interpretations are enabled through the combination of the relatively abstract visualisation with the content and formal design that are already present in the viewer's head. Depending on the focus
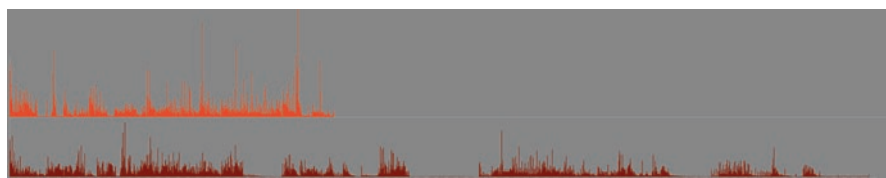
Fig. 5.27 Shot lengths for *The Eleventh Year* (above) and *Man with a Movie Camera* (below)
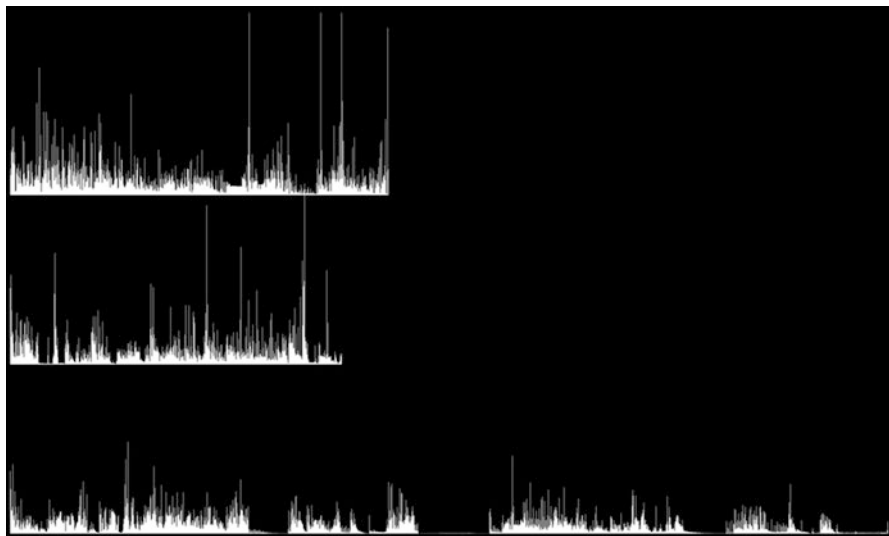
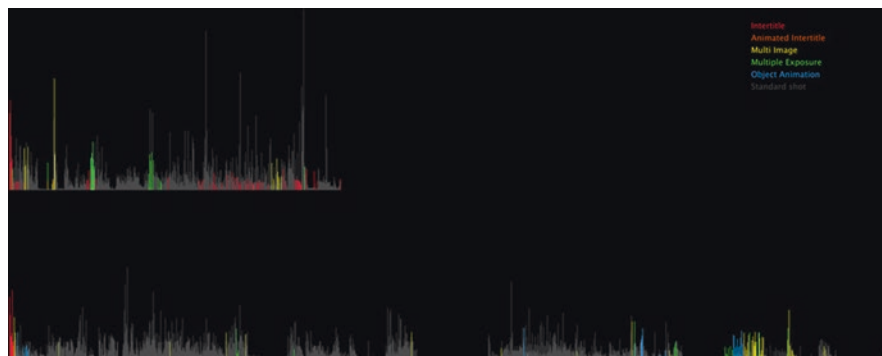**Fig. 5.28** Shot lengths for *Three Songs of Lenin* (above), *The Eleventh Year* (centre) and *Man with a Movie Camera* (below)

of the investigation, the graph can already suggest interesting sections of the film in which more in-depth detailed studies can then be carried out.

The lengths of shots can also be visualised in ways other than a vertical line and thus perhaps perceived more intuitively in terms of both their own scale and that scale in comparison with other shots. The visual representations in Figs. 5.32, 5.33, 5.34, and 5.35 make use of different graph solutions and were developed using different films. The size of the square matches the shot length, i.e. the larger the square, the longer the shot. At the same time, the height of the squares corresponds to the lengths of the shots, i.e. the higher the square on the y-axis, the longer the shot. While the "empty squares" (Figs. 5.29 and 5.30) permit further harvesting of information, the visualisation with "filled squares" (Figs. 5.31 and 5.32) already possesses a pure aesthetic value exceeding their information value. The squares cover each other and make it almost impossible to get an impression of details.

The form of representation must be viewed more critically, as it offers no improvement when compared with the line diagram. With one exception that the long shots at the end of *The Eleventh Year* are longer than all shots in *Man with a Movie Camera* is in this form of representation (squares) immediately obvious, i.e. the differentiation between the total lengths of different films is in this representation easier than in the previous ones. A further visualisation with circles instead of squares also provides the shot lengths in figures and is, despite the complexity of its overall view, a helpful way of presentation in the detailed view.[13]

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[13] Cf.   http://www.flickr.com/photos/culturevis/3971143644/in/set-72157622608431194.   Last accessed 18 Aug 2018.

Fig. 5.29 Shot lengths for *In the Shadow of the Machine* (above), *The Eleventh Year* (centre) and *Man with a Movie Camera* (below)

Fig. 5.30 Shot lengths for *In the Shadow of the Machine* (above), *The Eleventh Year* (centre) and *Man with a Movie Camera* (below)

Fig. 5.31 Shot lengths for *In the Shadow of the Machine* (above), *The Eleventh Year* (centre) and *Man with a Movie Camera* (below)

Fig. 5.32 Shot lengths for *The Eleventh Year* (above) and *Man with a Movie Camera* (below)

Types of Shots

Each shot was assigned to a shot type in the manual annotation. In the diagrams already available, this additional information was added with a colour, thus transmitting an impression of the distribution of the shot types throughout the film. In the following graph (Fig. 5.33), all standard shots are coloured red, while all other shot types remain white. The terms standard shot, intertitle, animated intertitle, multi-image, multiple exposure and object animation are taken from the terminology of the Digital Formalism project. The standard shot is every normal shot that is not distinguished as an intertitle, nor as a special type of formal process, such as a dissolve, double exposure or animation. As the standard shot is by far the most common shot type, this type of illustration is quite useful for giving an impression of where other shot types, such as multi-images or intertitles, are clustered, in order to target those areas for analysis. A detailed view from the beginning of *The Eleventh Year* (Fig. 5.34) can make this statement easier to understand. The white areas cluster naturally with the opening titles, as
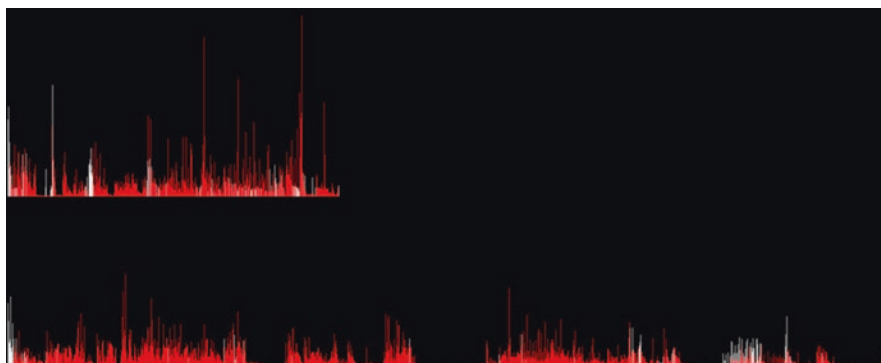
Fig. 5.33 Shot types for *The Eleventh Year* (above) and *Man with a Movie Camera* (below)
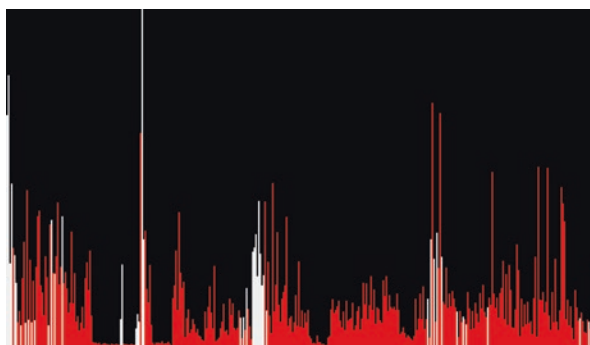
Fig. 5.34 Shot types for *The Eleventh Year*, detail

Fig. 5.35 Shot types for *Three Songs of Lenin*
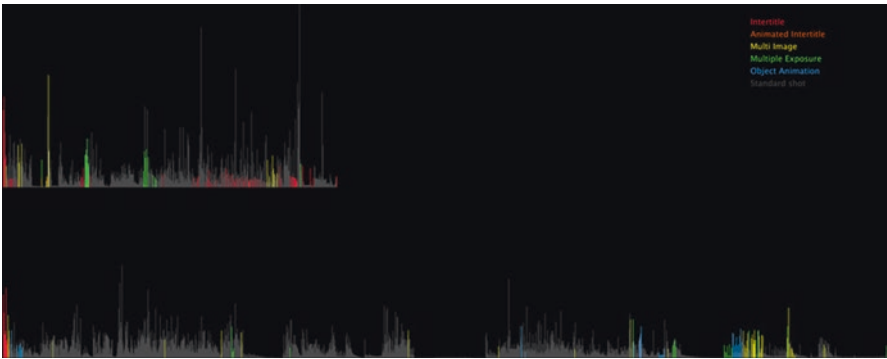
Fig. 5.36 Shot types for *The Eleventh Year* (above) and *Man with a Movie Camera* (below)

well as at the beginning of the second reel in a series of dissolves. From the diagram, such "concentrations" can be recognised and may then be checked semantically in the film itself.

In the following graphs, as well, the standard shots remain in one colour (grey), in order to direct one's attention to other types of shots that are not as frequently represented. The further annotated categories are given different colours according to the visualisation. In the first visualisations (Figs. 5.35, 5.36, and 5.37), the standard shots are represented in grey, the intertitles red, animated intertitles orange, multi-images yellow, multiple exposures green and object animations in blue.

Naturally, the individual categories can be given different colours (Fig. 5.38). Here, the standard shots are once more represented in grey and the intertitles red, but multi-images are green, multiple exposures light blue and object animations blue. It is chiefly to be recommended that the allocation of colours should be suitable to the focus of the analysis and that the signal colours be used for those aspects of respective interest.

Fig. 5.37 Shot types for *Three Songs of Lenin* (above), *The Eleventh Year* (centre) and *Man with a Movie Camera* (below)
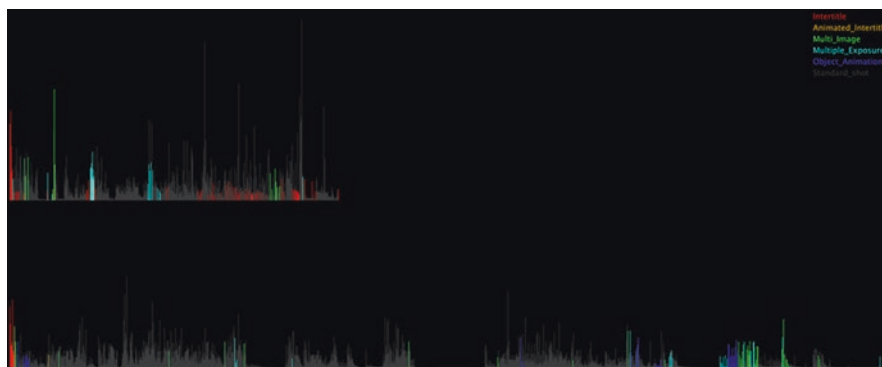
Fig. 5.38 Shot types for *The Eleventh Year* (above) and *Man with a Movie Camera* (below)

Motion Types

In the next graph (Fig. 5.39), for the film *The Eleventh Year*, two categories are combined: the shot type with the corresponding motion type. This enables a statement to be made about which types of shot contain less or more motion within the image. The shots are coloured according to the type of motion, while in the lower bar, the corresponding shot types (e.g. standard shot, intertitle, etc.) are represented by colours. The standard shots remain grey, in order to allow the colouring of the other shot types to make them more prominent. Information is already represented here in a very concentrated form; this is, then, a visualisation that enables recognition of very complex contexts.

It is precisely for films like *The Eleventh Year* that an abstract form of motion representation is appropriate, as a single viewing leaves no clear impression as to the formal structure. An analysis of the diagram can help here, at least in answering open questions about whether non-standard shots are endowed with a higher intensity of motion. The detailed view (Fig. 5.40) shows that in a purely visual
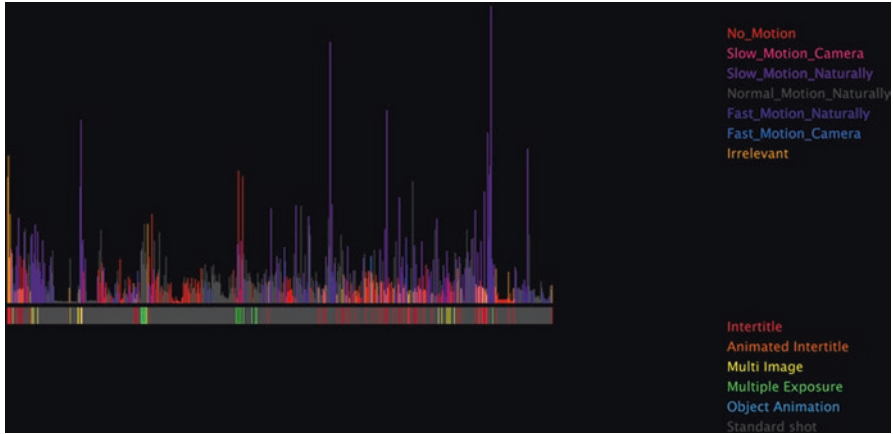
Fig. 5.39 Shot types and motion types shown in combination for *The Eleventh Year*

Fig. 5.40 Shot types and motion types shown in combination for *The Eleventh Year*, detail
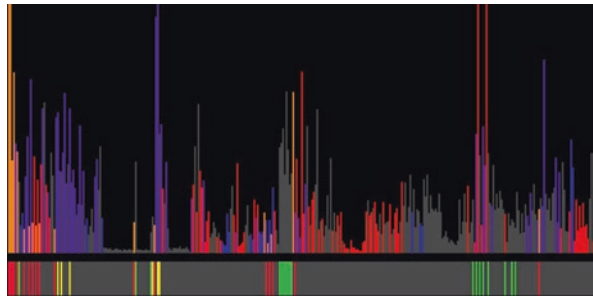
sense, at least one correlation can be established: multi-images contain mainly slow natural motion. This information can subsequently be followed up in a precise analysis of the shots and the thesis arising from the graph checked. For precise statements and the checking of their plausibility one must in any case employ statistical methods.

A similar combination of, this time, three different categories – shot type, motion type and POV – can also be represented in another form (Fig. 5.41).

This kind of visualisation, a so-called multigraph, enables a still higher concentration of information and complexity. The figure next to the designation at the left-hand margin always refers to the number of the respective category in relation to the total number. 37/1731 for multi-image means that 37 shots have been assigned to this shot type, and there are 1731 shots in total in *Man with a Movie Camera*. Vertical (i.e. film-chronological) correlations between the three categories can thus be determined for the entire length of the film, for example, in which part of the film fast motion within a shot appears with greater frequency and whether they do so in relation to a POV marked in any particular way. Here, too, the potential has less to do with concrete statements about the film than with the visual information which directs our attention to particular sections of the film.
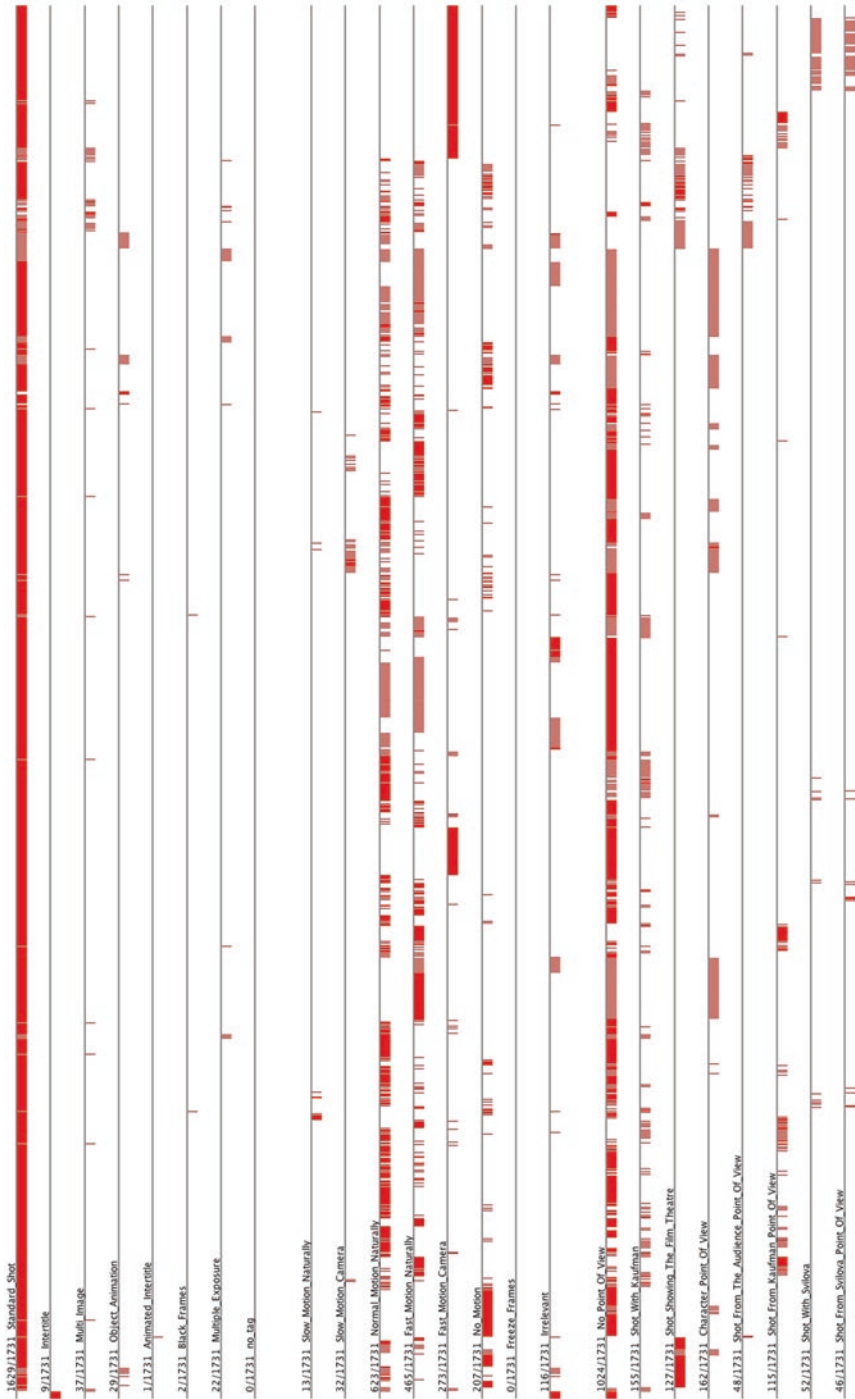
Fig. 5.41 Shot type, motion type and POV shown in combination, example: *Man with a Movie Camera* (image rotated)

A multi-coloured variant (Fig. 5.42) uses the same type of visualisation but is easier to read, due to a graphic design more conducive to overview. In the following representation (Fig. 5.43), the graph has been supplemented with shot lengths. The principle is once more the same, film-chronological contexts for categories can be read from it, but in this way, it can also be determined how long the individual shots are. The concluding example of this series of multi-graphs consists of a similar graph type (Fig. 5.44), in which, for the sake of overview, the motion types have also been entered. In all these multi-graphs, the limit of what a human observer can process at a glance has long been exceeded. It is also a matter for discussion as to whether these complex questions could be better portrayed in another form. These formal experiments are evidence that a combination of data from even three or four categories can render an abstract visual representation almost indecipherable.

Visual Characteristics of the Image

Of primary importance to this book are Manovich's statements about a direct, i.e. reduction-free visualisation, which the media scholar has implemented in practical terms with data from the Vertov's films. For the image data to be represented and organised in such a way as to permit retention of the original form and a maximum of image information is fundamental to this point (Manovich 2010). It has already been said that the reduction of information is a requirement of visualisation, as the representation in graph form can only take place after the process of quantification. Digitisation is, of course, also a kind of quantification, which means that in its case the reduction is shifted to the level of image resolution and the spectrum and depth of colour. The same is also true for the encoding of films, in which both image and sound information are compressed to a high degree. When one is aware of these realities, and makes the effort necessary for optimal preparation of the images, one can then utilise the enormous advantage of being able to work directly with the image information as semantic information.

The individual pictures (frames) from the film are then arranged according to their visual characteristics, after an algorithm for a particular number of images (depending on total range and processing power) of the desired parameters has been generated. In the following visualisations, the brightness is represented on the y-axis and the "number of shapes" in the image on the x-axis. Depending on the emphasis of the research with which one is dealing, geographic and temporal groupings could also be selected. Tara Zepel, for example, organised the paintings of Vincent van Gogh according to the location of creation, Paris or Arles. It turned out that the works from Arles are brighter compositions.[14]

Due to overlaps, not all frames are visible. Two different graphs for *Man with a Movie Camera* were generated, one visualising every 25th frame (Figs. 5.45 and 5.46) and the other only every 100th frame (Figs. 5.47 and 5.48). It can clearly be

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[14] For more information cf. The project documentation and the visualisations at https://www.flickr.com/search/?text=culturevis. Last accessed 18 Aug 2018.
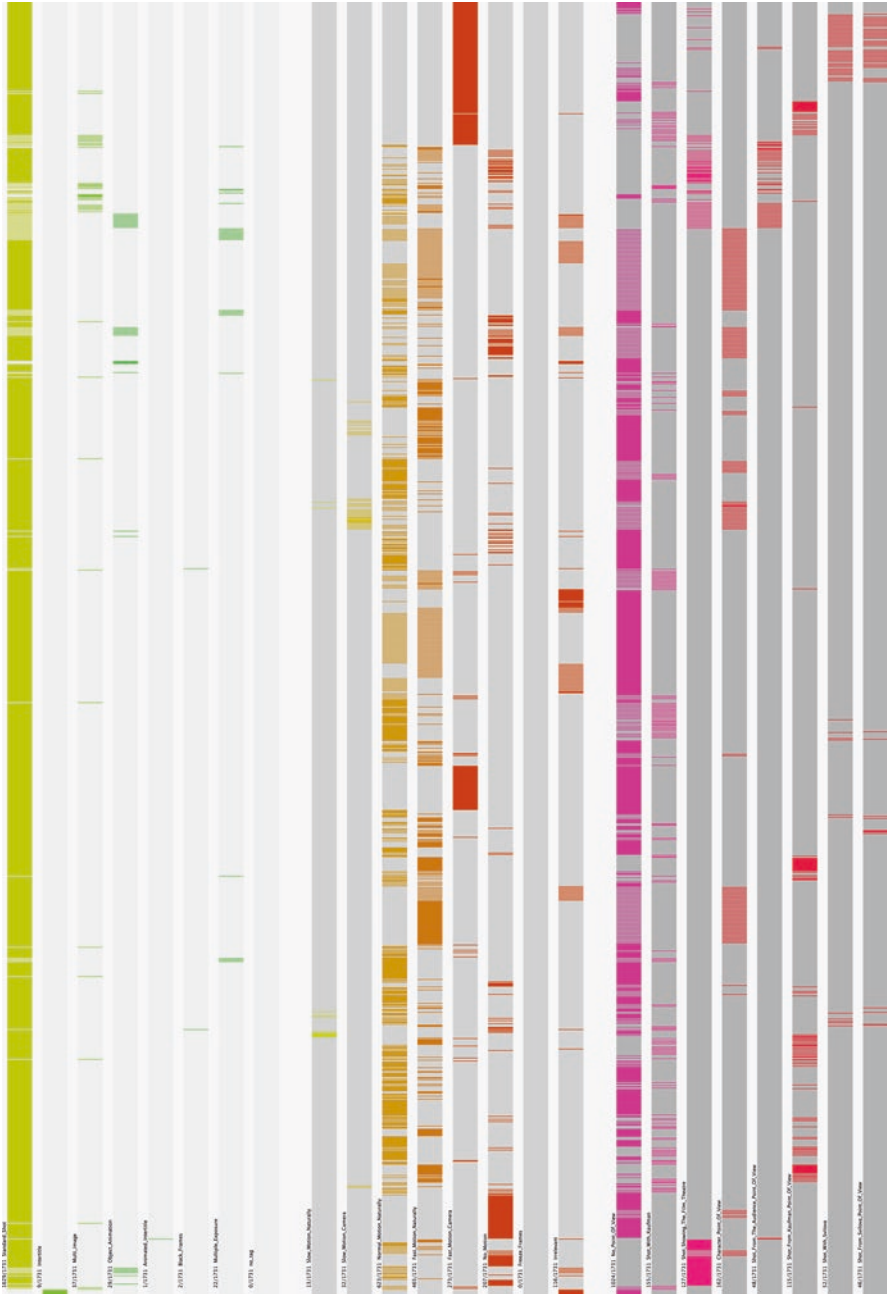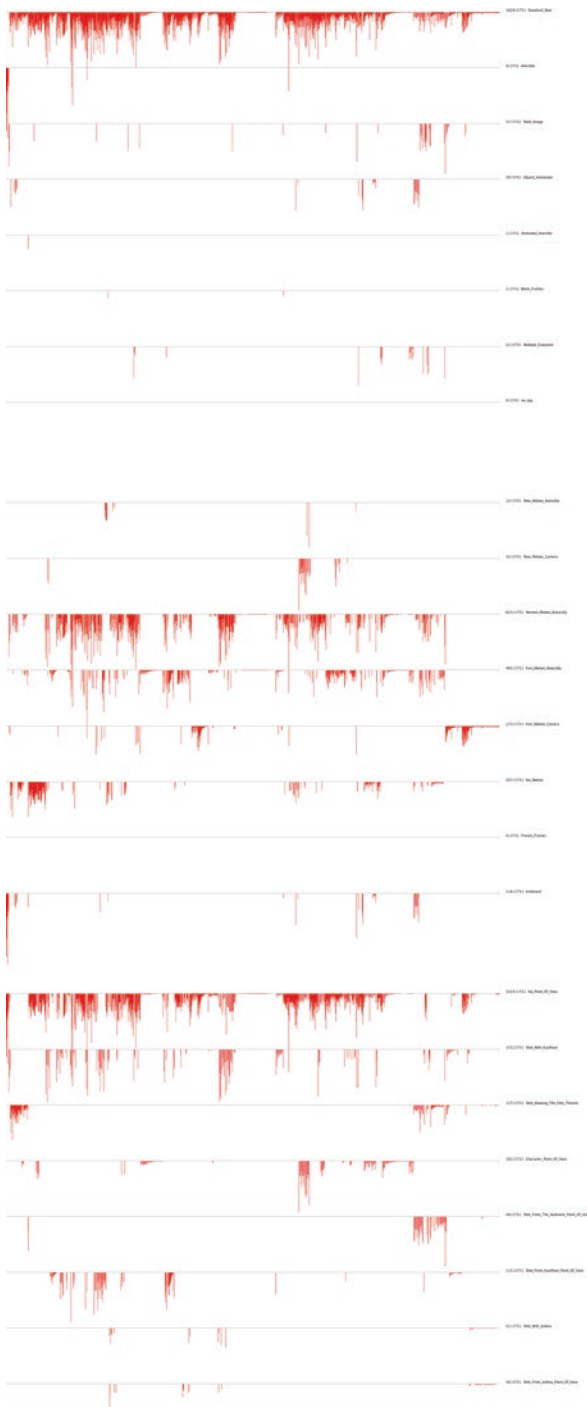
Fig. 5.42 Shot type, motion type and POV shown in combination, example: *Man with a Movie Camera* (image rotated)

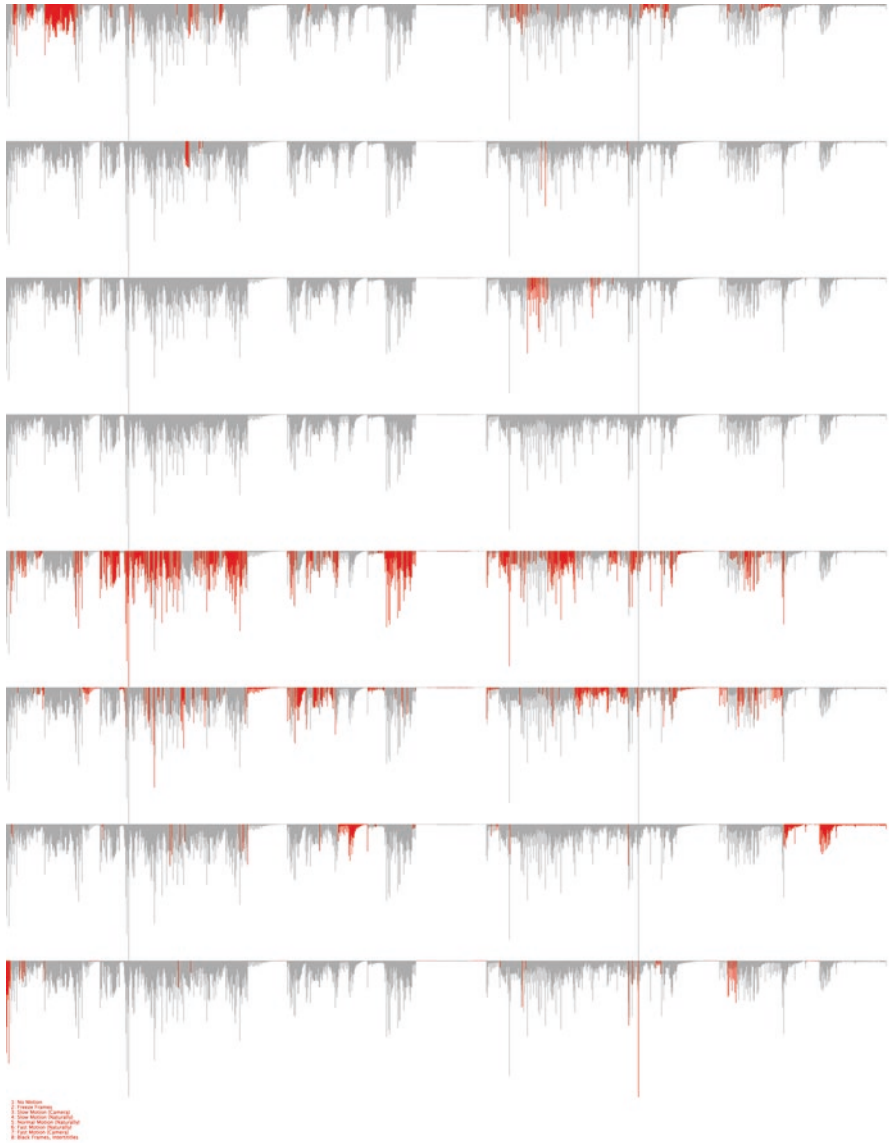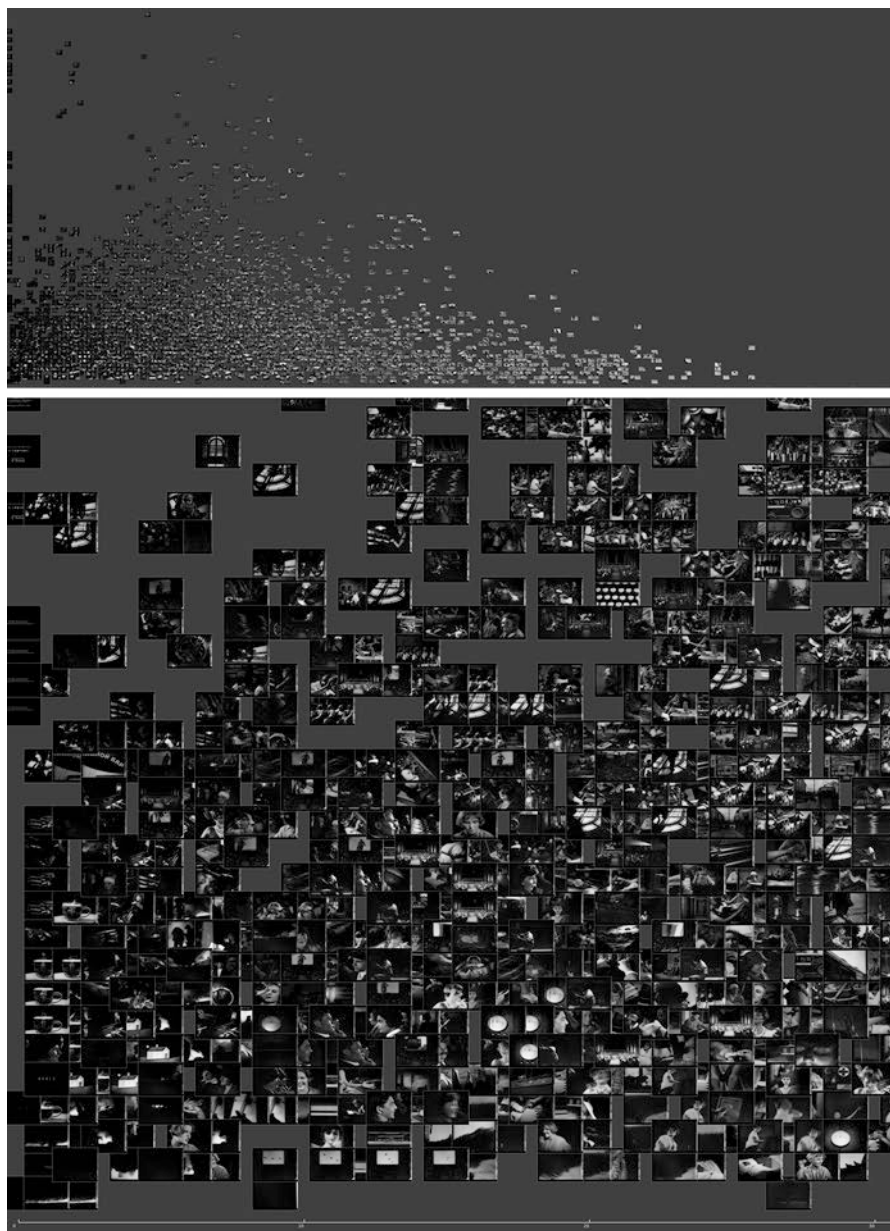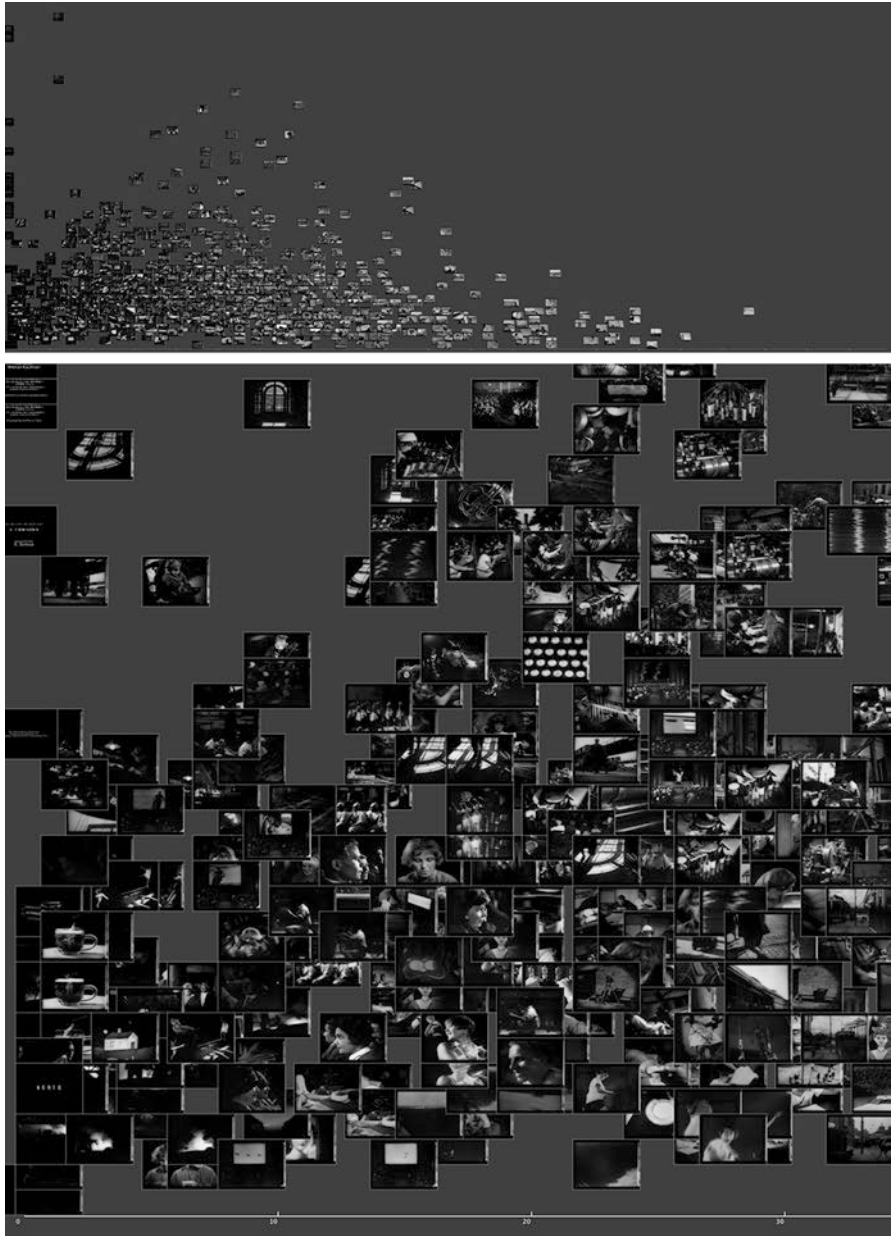**Fig. 5.43** Shot type, motion type and POV shown in combination, example: *Man with a Movie Camera*

Fig. 5.44   Motion type, example: *Man with a Movie Camera*

Figs. 5.45 and 5.46 Brightness of a single frame and number of shapes for *Man with a Movie Camera*, every 25th frame (above), and a detailed view (below)
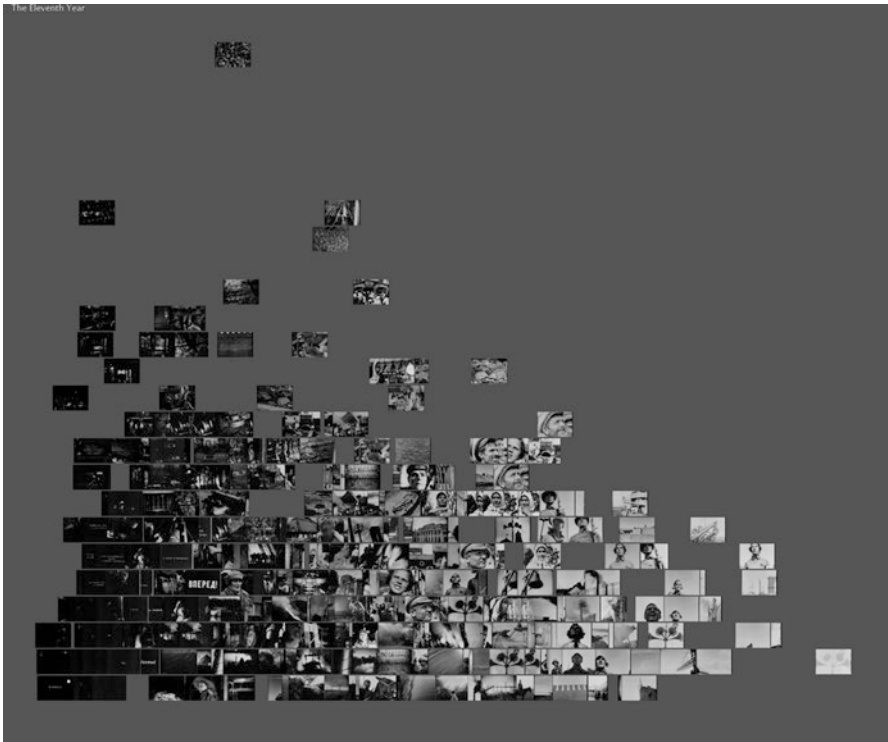
Figs. 5.47 and 5.48 Brightness of a single frame and number of shapes for *Man with a Movie Camera*, every 100th frame (above), and a detailed view (below)

Fig. 5.49 Brightness of a single frame and number of shapes for *The Eleventh Year*, first frame of every shot

seen that the smaller sampling also results in a similar pattern. A useful variant of this process is to use only the first frame of every shot – here the example is *The Eleventh Year* (Fig. 5.52). If one assumes that the composition of shots retains, at least to a certain degree, the same degree of brightness and variety of shapes, even this reduced attempt with the smallest sampling can still lead to conclusions about the film's visual design (Fig. 5.49).

Representation of Montage

A significant feature of film as an audiovisual object for research is that the data is arranged in a certain way, that is to say, they accord with the narrative structures chosen by the film-makers for a specific purpose. In the following examples, an attempt is made to represent the design of the respective films visually while preserving the overall image information. Each of the 1782 shots of *Man with a Movie Camera* is represented as a single frame per second and arranged sequentially.

The film runs in rows of single frames beginning from the upper left and proceeding to below at the right (Fig. 5.50).

A second suggestive possibility for visualising the editing of a film at a glance consists of using only the first frame of every shot (Fig. 5.51). The black frames in the last row are only placeholders in the graph and do not correspond to any frames in the film.

Such montages are naturally predestined either for silent films or films leaning heavily on a strong visual effect with prominently foregrounded pictorial composition. In the visualisations presented here, the auditory level is completely hidden. It would be fascinating to imagine the possibilities for a combined representation of image *and* sound. One would probably have to leave the two-dimensional level and design an interactive visualisation which would enable the appropriate sound to be heard when a frame is clicked. Such a procedure would also be conceivable for purely visual montages and has, in fact, already been realised as an artistic project. For his film *Mosaik Mécanique* (2007), the Austrian film-maker Norbert Pfaffenbichler dismantled the American slapstick comedy film *A Film Johnnie* (1914, George Nichols) into its shots and presented it in its entirety from the top left to the bottom right on the screen – the first impression matches a visualisation of the editing, similar to my examples. The film then begins, and in the 9 min that are the duration of *A Film Johnnie*, we see in each frame the appropriate shot playing – simultaneously with all the other shots.

Whereas the overview (Fig. 5.51) gives an impression of the distribution of light and dark throughout the length of the film, indirectly also informing about the length of shots, the visualisation using the first frame of each shot provides a different kind of information. The close-ups, such as of the faces of people, or the eye, are clearly more prominent and provide orientation points for the analysis. Alternating sequences of shots become visible.

The same process may be used for the film *The Eleventh Year*. To begin with, one frame per second of the film is again represented (Fig. 5.52), followed by the first frame of each shot (Fig. 5.53). In this graph, sequences with rapid editing are conspicuous due to the alternating appearance of shots with the same image content, such as the shots of the hammering worker in the upper part of the graph, which alternate with close-ups of legs. The intertitles, too, which often serve as a means of structuring, can be instructive.

Combined Image Information and Shot Length

In order to arrive at more precise statements about the film's structure through the use of the shot lengths, a grouping of the shots in meaningful units is necessary. A first step in that direction is the attempt simply to supplement the already generated
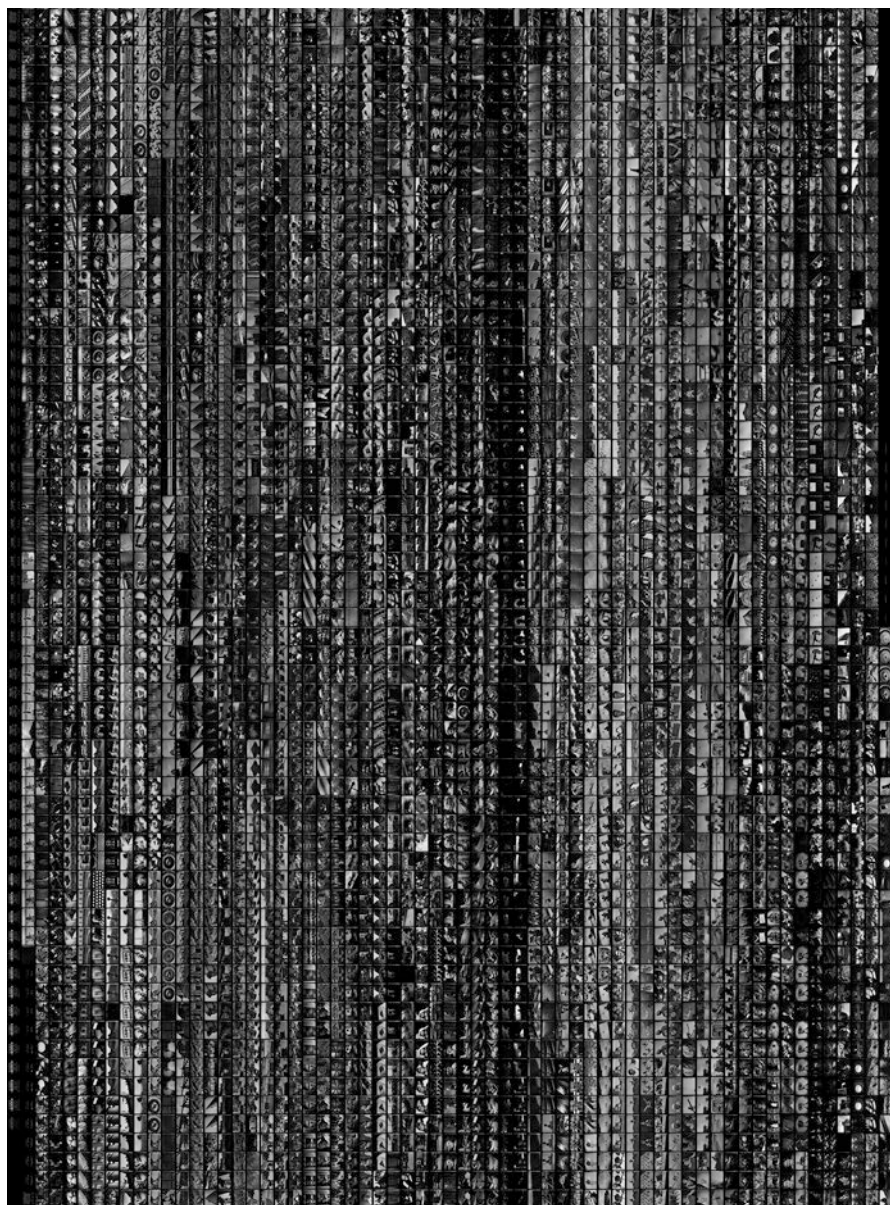
Fig. 5.50 Montage for *Man with a Movie Camera*: a single frame for each second of film
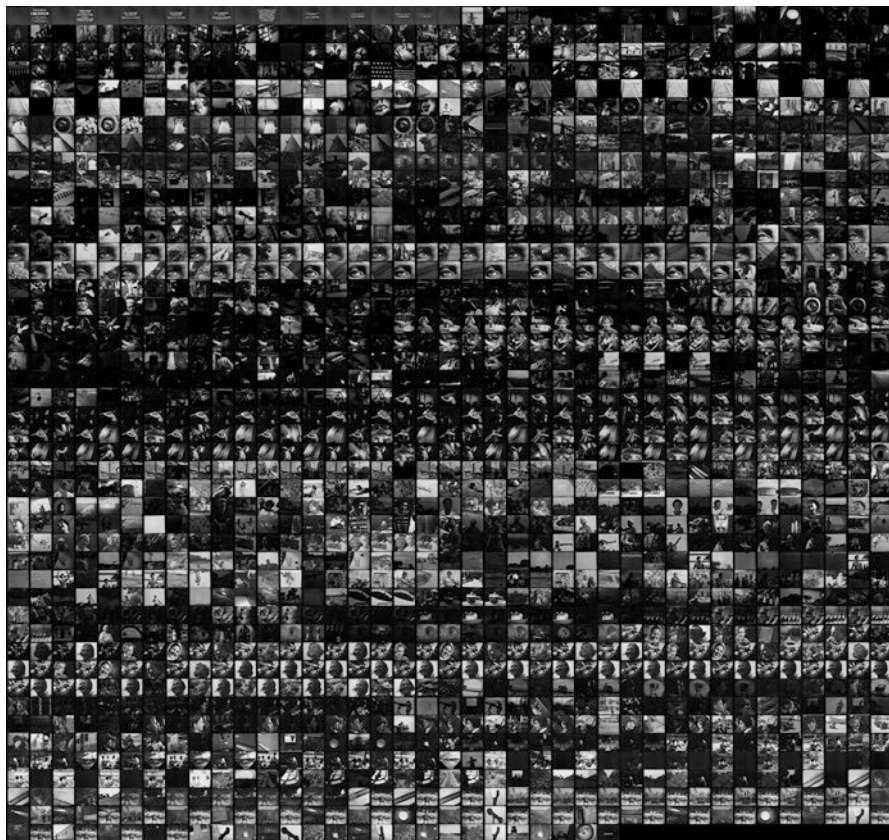
Fig. 5.51 Montage for *Man with a Movie Camera*: a single frame per shot in the film, beginning at the upper left and ending below the right

graphs with image information. In Fig. 5.54, for example, an extract with ten shots from *Man with a Movie Camera* has been selected, which also contains the longest shot in the film: the departure of the buses from the famous garage, designed by the architect Konstantin Melnikov. All the frames of a shot are spread along the x-axis, while the y-axis contains the number of the respective shots. Vertov conceived and edited his reels as semantic and formal units, which is, in a general sense, a relevant structural feature of his films. It is therefore worth striving for a form of representation which permits a visual comparison of the individual reels while retaining their semantic information.

In the following visualisations of the film *The Eleventh Year* (Figs. 5.55 and 5.56), the parts of the film are represented in accordance with the originally preserved five film reels (also in five acts). Each row thus corresponds to a reel of the film, with all the shots appearing in each arranged from left to right. The shots are each illustrated with a single frame. Although it is not possible in this way to represent the differences
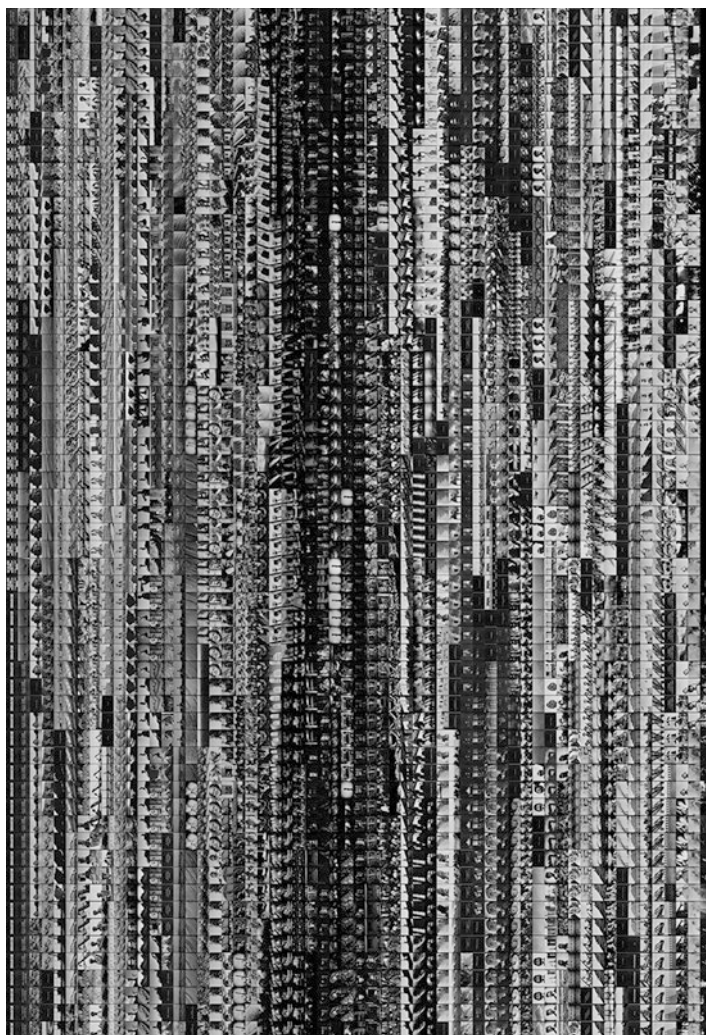
Fig. 5.52 Montage for *The Eleventh Year*: a single frame per second of film

between the lengths of shots, one is at least provided with information regarding the number of shots per reel. The length of the reel's bar on the y-axis indirectly expresses faster cutting.

In all these observations and first approaches towards analysis, the respective preservation status of the film print being used must naturally be taken into consideration; in the case of *The Eleventh Year*, this is complicated. In spite of this, it is precisely the fact that semantic information is directly available that helps guard against rash misinterpretations. Whether a part of the film's ending was, in fact, lost over the course of time – which was often the case with Vertov's films – can perhaps

Fig. 5.53 Montage for *The Eleventh Year*: a single frame per shot of the film, beginning upper left and ending bottom right

already be seen with a glance at the graph, for from it one receives direct information regarding the design of the shots. It can thus be checked whether the existing ending actually corresponds to possibly available written documentation or is at least plausible. The reels are displayed in Figs. 5.55 and 5.56 from the bottom (first reel) to the top (fifth reel). These graphs were created at the beginning of the experiments; all further visualisations are then arranged from the top (first reel) to the bottom (last reel).

In order to include the information about the shot lengths in the graph, further attempts were made with respect to the graph's design, leading to the development of different forms of representation. In Fig. 5.56, the height of the individual frames on the y-axis is determined by the length of the shot in question.

In both graphs in Figs. 5.57 and 5.58, a further representational variant was tried, which in my opinion indicates promise and ought to be developed further. Underneath the images, the single frames from each shot, the shot length is visualised in bar form, i.e. the longer the shot, the longer the bar (Fig. 5.57).

The total number of frames in a shot is additionally given underneath the bar, in order to facilitate comparison. First the entire film divided into reels may be seen, followed by a sequence of the film extracted as a detail (Fig. 5.58). This deals with an enlargement of a sequence from Fig. 5.60 that is of formal interest. It can clearly be seen that the shots are all about the same length (from four to eight frames). The shot's content may also be directly included in the analysis.

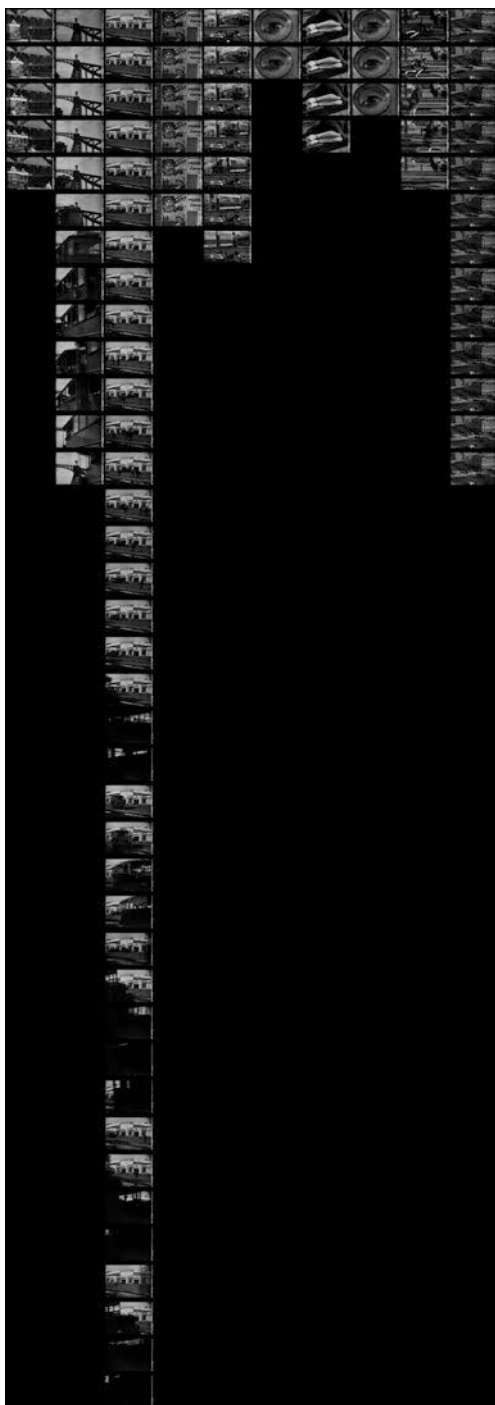**Fig. 5.54** Ten shots from
Man with a Movie Camera

Fig. 5.55 Reels 1 to 5 of *The Eleventh Year*, detail of the beginning of the film

Fig. 5.56 Reels 1 to 5 of *The Eleventh Year*, shot lengths according to height on the y-axis, detail

Fig. 5.57 Reels 1 to 5 of *The Eleventh Year*

Fig. 5.58 A formally interesting sequence from *The Eleventh Year*

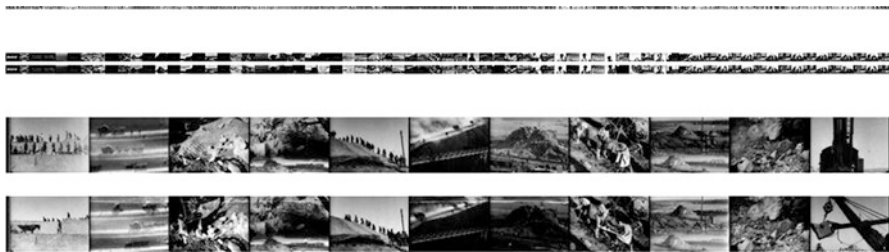**Fig. 5.59** Juxtaposition of the first (below) and last (above) frames of a shot from *The Eleventh Year*

Fig. 5.60 Overview graph of the first and last frames of each shot in *The Eleventh Year*, from overall view (above) to detail (below)

Combined Image Information and Shot Compositions

A particularly interesting form of visualisation is devoted to the framing design of individual shots, or, to put it more precisely, the ways in which the first and last frames of a shot differ from one another. In order to make the change visible at a glance, the first and last frames are arranged together in a graph. This permits one to assess whether Vertov composed the shot dynamically, for example, through the movement of camera and objects or whether it remains largely static. In the next example, from *The Eleventh Year* (Fig. 5.59), Vertov's approach to close-ups is simultaneously illuminated. In his films, they are often edited in as blocks, and they also remain largely static. In the following overview graph (Fig. 5.60), three different scales for the same visualisation are illustrated. In this way, information on both the larger narrative arcs and the visual details for a section may be obtained at a glance.

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Chapter 6
Charts and Diagrams of Dziga Vertov

The kinoks attribute a completely different significance to editing and regard it as the organization of the visible world. (Vertov 1984a [1926b]: 72)

An Artist in Word, Image and Sound

The personal and professional trajectory of the director Vertov was marked by intermedial relationships. The family home in which he grew up had an affinity to literature – his father was a bookseller in Białystok – and the film-maker had already begun to write poems and stories at the age of 9:

> Already in earliest childhood, at the age of 7 or 8, I began to write. When I was 9 years old I wrote a novel with the title "The Iron Hand". I wrote the next novel half a year later. It had the title "Uprising in Mexico". I must tell you that the novel "The Iron Hand" is set in America, just as "Uprising in Mexico". Naturally, at this time I had never been in either the USA or in Mexico. At that time it could only have been my fantasy, which rested on the impression of a large number of books read. Like all young people, I devoured an incredible number of books, above all by Jules Verne, Mayne Reid, Aimar, Cooper, etc. That was the world in which I then lived. The reality I discovered in the books was at that time also my reality. What I learned from these novels I almost took to be documentary facts. I did not have any other knowledge of these worlds. (Vertov 2008b [1986]: 289)

Later he was to discover books of popular science and, after reading them, would try to compose short texts in their style. In doing so, he still remained loyal to the literature of fantasy: "Novels of fantasy and reports on popular science – these are the two lines of my early development" (ibid.: 290). As a third line, Vertov named poetry, for he was soon to write his first poem, entitled "Maša", which Vertov dedicated to his aunt, his mother's sister, who worked at the women's medical institute in St. Petersburg (Kaufman 1976: 76). His musical tendency was being encouraged at the same time, and the young Vertov attended the music school in his native city from 1912 to 1915, being taught piano and violin. The director reported that even in

tests in other subjects at school, he would use rhythmic mnemonic aids, as he did not have a good memory. Even then, he was interested in and occupied with the rhythmic organisation of the sights and sounds of the visible world. After initial experiments with sounds recorded on gramophone records, he progressed to making his own recordings. For Vertov it was, in a manner of speaking, a necessary process, in order to investigate and further to develop the human sense of hearing.

> But the experiments with the sounds that had already been recorded did not satisfy me. In nature I heard a much greater number of different sounds and not only the singing and violin-playing from the repertoire of conventional gramophone recordings. It was thus that the idea came to me of the necessity of expanding our ability of hearing in an organised manner and not to limit this ability to conventional music. In "I hear" I included the entire audible world. My attempt to record the sounds of a sawmill originates in this period. (Vertov 2008b [1986]: 291)

Vertov's sound experiments always went hand in hand with poetic experiments. The future director tried his hand not only as a presenter but also drew his poems on posters and pasted them throughout the city (ibid.: 292). Later, however, he decided to work in the cinema, where, as he writes, there was at least an apparatus that could record the "waterfall" of impressions for the eye, which he planned, but had not yet implemented, for hearing (ibid.). Following his move to Moscow in 1915, he initially worked mainly in verbal form, both as title writer for the Moscow film committee and, a couple of years later, as an enthusiastic escort for the films on the agit-trains. MacKay (in preparation), in his planned publication, has been the first to describe this aspect, researching and sourcing it with documents. In his diary entries, Vertov would repeatedly compare himself to a painter or a musician (Tode and Gramatke 2000: 87). He also described his pre-filmic activities as preparatory work for rhythmic montage of verbal and acoustic material, which he carried out on several levels: in the montage of words, in the montage of sounds, in the interplay of music and poetry and in the laboratory of hearing, which ultimately encapsulated all these experiments (Tsivian 2004a, 2004b: 23).[1] In many ways, Vertov's film work is shot through with literary and musical traces, which the director also preserved in scenarios, diagrams and tables with graphic and strikingly coloured designs.

The RGALI Vertov collection preserves all the poems that were not published in his lifetime. To date, they have not been published, with the exception of three poems, which Tsivian has printed and annotated (ibid.: 36). The visual design of these documents is particularly interesting, as not only the words are important but the overall picture with the drawings in strong colours and the instructions for the poems' performance. Thus in the bottom left-hand corner of one is written: "Dziga Vertov sings and reads", and in the upper corner, it is noted that this is an etude. It is not hard to deduce from this that the film-maker's poetry was to be heard and seen and not just to be read. The texts are basically futuristic and almost untranslatable and were written by Vertov on yellow paper before he handed them out in the streets. These picture-poems (as Tsivian aptly calls them) could be recited to music, especially to pieces by the composer Aleksandr Skrjabin, who was much admired by Vertov and was the dedicatee of at least one of these picture-poems:

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[1] Tsivian refers to the document numbered RGALI 2091-2-170.

As was not unusual among Russian "Cubo-Futurist" poets, Vertov wanted others to see his poems hand-written, hand-coloured, and richly illuminated. In addition he attempted to crisscross poetry and music – an experiment which he refers to in one of his later autobiographies (1929) as "rhythmic montage of verbal and acoustic material", and specifically as "the projection of music fragments upon words (Skriabin)." (ibid.)[2]

In the Dziga Vertov Collection in Vienna, there are a total of 11 poems, listed as follows[3]:

Archive signature	Title of document	Date
V 001	Start (Start)	ca. 1922
V 002	Iz predislovija k poème "Vižu" (From the preface to the poem "I see")	ca. 1926
V 003	Mag izyskannyj … (Exquisite Magician …)	1917 (?)
V 004	Tema (Theme)	Probably the 1930s
V 010	Tik-tak	Aug. 1920
V 011	Dziga Vertov/"Zdes' ni zgi …" (Dziga Vertov/"Here no zgi …")	Sept. 1920
V 013	Drug bodryj … (Good Friend …)	1921
V 122	"Ni žalob, ni stonov …" ("Neither complaining, nor moaning")	ca. 1934
V 160.I	50	1946
V 170	"O Svilovoj" ("About Svilova")	Probably 1922
V 171	Iz serii N. N. x.x Požalujista, bez namekov (From the series N. N. x.x Allow me, without insinuation)	[undated]

In addition, there are 40 documents available in either original form or as photographic (photocopied) reproductions. From among these, 20 documents are particularly interesting due to their formal design and their content. Most of them can be directly related to a film work; some were also prepared in order to illustrate new (and often unproduced) film ideas or were intended as a visualisation of an innovative organisational structure for the film industry. Apart from the document designated as V 175, all diagrams have been published and furnished with a short commentary. For others there is only a rough translation available or none at all.[4] Vertov's diagrams are mainly discussed as visual illustrations in their aesthetic and also their generally puzzling appearance, within the more general context of metric

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[2] The Vertov quotes originate in the documents designated as RGALI 2091-2-170.

[3] For an illustration of the entire inventory with a commentary, as well as complete translations for parts, cf. Austrian Film Museum, Tode, Wurm (2006).

[4] There is no translation available for V 079, V 092, V 133, V 137, V 141, V 142, V 149, V 152, V 153 and V 175.

films. To date, there have been only isolated attempts to relate film and diagram to one another in a film history or film scholarly sense and to understand the special meaning of the respective system of registration for the corresponding film.

When, however, the individual diagrams were created, whether before the shooting, before the editing of the negative or after completion of the film, can only be established with certainty in very few cases. The documents differ from one another greatly in their function and design, and at the present time, in terms of the materials available, there are no indications of a systematic evolution of Vertov's method of visualisation.

Archive signature	Title of document	Date	Related to film
V 039	Cifrovaja zapis' (Numerical record)	1924	*Kino-Eye*
V 040	Rabotka doklada v Gostorge, tov. Belen'komu (Draft for a lecture in Gostorg, sent to Comrade Belenkij)	1924	*Sixth Part of the World*
V 063	Baza dlja nastupajuščich kino-apparatov (Basis for future movie cameras)	ca.1924	*Kino-Eye*
V 072	Odinnadcatyj (The Eleventh Year)	1928	*The Eleventh Year*
V 078	Kiev I. sent. 28 g. čelovek s kinoapparatom (Heftberger 2014) (Kiev, 1st of September, 1928, Man with a Movie Camera)	1928	*Man with a Movie Camera*
V 079	"Čelovek s kinoapparatom", schema ėpizoda, postroennogo na associacijach schodnych dviženij č. IV kadry 39–126 ("Man with a Movie Camera", plan of an episode, structured by association of similar movements, part 4, frames 39–126)	ca. 1928	*Man with a Movie Camera*
V 080	Otryvok montažnoj frazy iz 4-j časti fil'ma č.s.k. (Excerpt from a montage phrase from part 4 of the film Man with a Movie Camera)	ca. 1928	*Man with a Movie Camera*
V 092	Simfonija Donbassa. Raskadrovka fil'ma. (Symphony of the Donbas. Breakdown of the film)	1930	*Enthusiasm*
V 131	K proėktu ob organizacii tvorčeskoj laboratorii I (Design for the Organisation of the Creative Laboratory I)	1936	
V 132	K proėktu ob organizacii tvorčeskoj laboratorii II (Design for the Organisation of the Creative Laboratory II)	1936	
V 133	K proėktu ob organizacii tvorčeskoj laboratorii III (Design for the Organisation of the Creative Laboratory III)	1936	

Archive signature	Title of document	Date	Related to film
V 137	Tri geroini (Three Heroines)	1938	*Three Heroins* (1938, Dziga Vertov)
V 141	Tri raboty I (Three Works I)	ca. 1935	
V 142	Tri raboty II (Three Works II)	ca. 1935	
V 147	Letajuščij čelovek (The Flying Human)	1941	
V 149	Proèkt organizacii raboty po vypusku fil'mov "Kino-korrespondent" (Organisational chart for editions of "Kino-korrespondent")	1942	
V 151	Tebe, front! Konstrukcija No. 1 (For you, Front! Construction No. 1)	1942	*To You, Front!*
V 152	Tebe, front! Konstrukcija No. 2 (For you, Front! Construction No. 2)	1942	*To You, Front!*
V 153	Tebe, front! Konstrukcija No. 3 (For you, Front! Construction No. 3)	1942	*To You, Front!*
V 175	Otryvok montažnoj frazy iz 6-j časti "čelov. s kino-apparatom" (Excerpt from a montage phrase from part 6 of the film Man with a Movie Camera)	1928	*Man with a Movie Camera*

Vertov experimented, over the course of his activities in film, with different forms of visualisation and, in addition to tables, also used depictions of individual sequences (episodes) similar to circuit diagrams. In the case of *Man with a Movie Camera*, for example, the scene of the barber was visualised in this way (Fig. 6.1). This document, though, corresponds precisely to the film; it can thus be assumed that it was prepared after the film's completion. Barbara Wurm interprets the diagram as a circuit diagram with the red connecting lines dictating a certain sequence which "justifies the linkages between, and jumps from, one column to another and makes them comprehensible by means of its indexical characteristic" (Wurm 2009: 30).

Other graphs, in turn, aim to illustrate special filmic techniques of the film in question, such as the relationship between image and sound (Fig. 6.2). Most frequently, however, according to current knowledge of what has been preserved, Vertov chose the form of a table, and it is no coincidence that for these he chose sequences with a fast editing rhythm; firstly, they had been specially prepared in a formal sense and, secondly, the eye is too slow to detect the rapid cuts in their individual parts. It is only in a form of visualisation other than the filmic that the look of a blueprint for such sequences can be made visible.
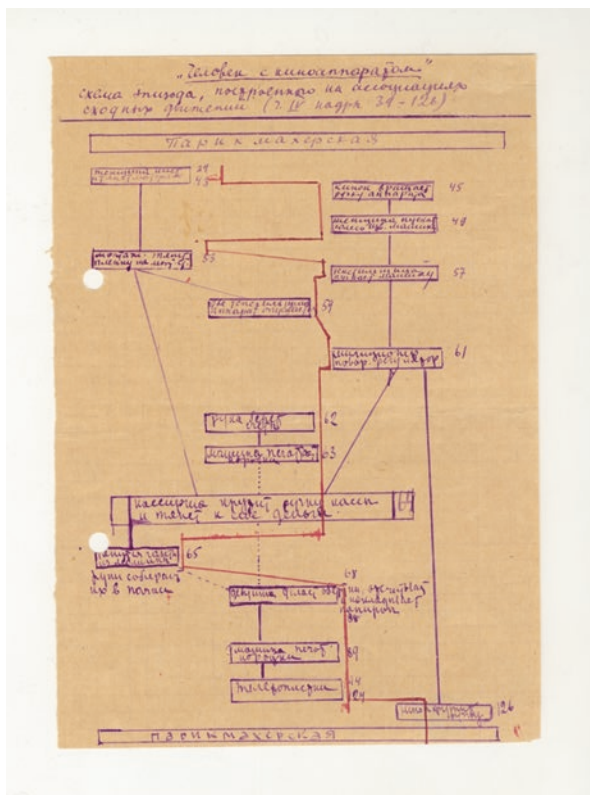
Fig. 6.1 Diagram for *Man with a Movie Camera*

Four of the most elaborate diagrams refer to the film *Man with a Movie Camera*, though varying greatly in their form. Two of these graphic depictions,[5] as well as a further diagram for *Kino-Eye*,[6] apparently originate, though, in a series of visualisations, each of which is devoted to an individual episode in table form. Vertov here uses the term "montage phrase" ("montažnaja fraza") which I, however, understand as being synonymous with the term "episode". The purpose seems not so much to have been the development of a tool for practical editing work; on the contrary, it may be assumed that the diagrams were prepared as specific illustrations of important, i.e. specially edited parts of the film. The observations presented in the book at hand permit one to conclude that Vertov had selected special parts of the films, envisioning their use primarily for publication purposes. This would have provided a convenient opportunity for the director to spread and propagate his ideas.

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[5] Archival documents with signatures V 080 and V 175, held in the Collection Dziga Vertov at the Austrian Film Museum.

[6] Archival documents with signatures V 039, held in the Collection Dziga Vertov at the Austrian Film Museum.

Fig. 6.2 Diagram for *Enthusiasm*
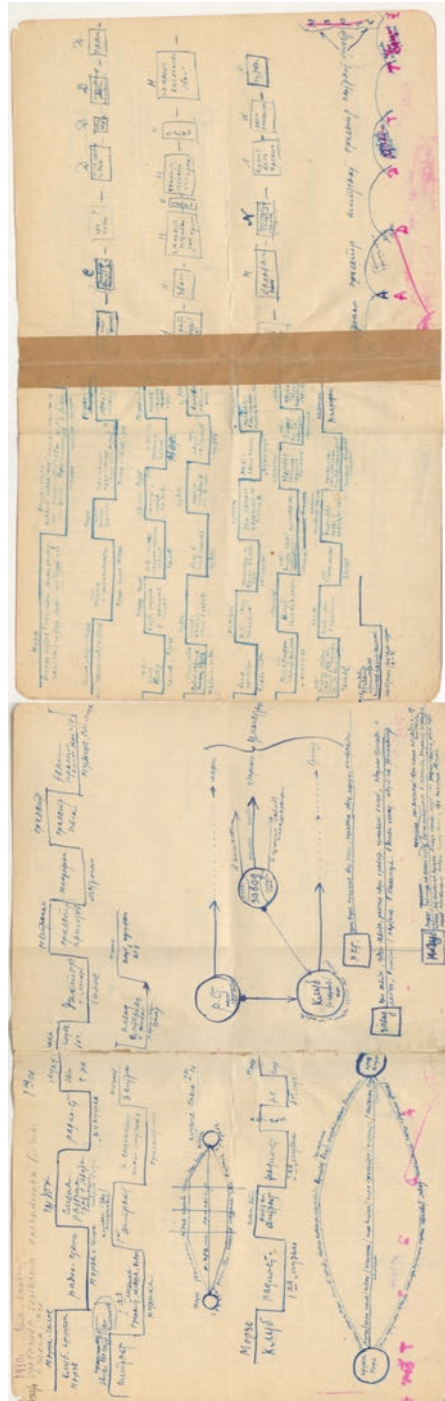
The "Flag Episode" of *Kino-Eye*

The diagram of *Kino-Eye* (Fig. 6.3) constitutes a special case, as it was already published in 1925 in Aleksandr Belenson's *Kino segodnja* (Cinema Today). In addition, it was printed by Semen Timošenko in his book *Iskusstvo kino i montaž fil'ma* (The Art of Cinema and Montage of Films) in 1926. In an accompanying commentary, the author explicitly points out how important for the analysis of the film *Kino-Eye* it is to be able to observe certain episodes and their editing in detail and in peace. The "flag episode" could serve as a model example of this, its graphic depiction proving Vertov's inventiveness, and, beyond that, it is the most effective method of leading the public into the dark, mysterious editing laboratory of the film-maker (Belenson 2004 [1925]: 108). Vertov himself describes the relevant episode, which he even tested on the public, as follows:

> The raising of the flag on the day the camp opened can serve as a model of a montage instant limited in time and space. Here, for a length of fifty feet, fifty-three moments that have been spliced together go by. Despite the very rapid change of subjects on the screen (one-fourth of a second is the maximum length of time an individual subject is present on the screen), this fragment can be viewed easily and does not tire one's vision (as verified by the worker-viewer). (Vertov 1984a [1926b]: 76)

In the left-hand column, all 16 of the subjects that appear are listed (from top to bottom): (1) head of the pioneer leader; (2) pioneer woman at mast; (3) mast and flag; (4) intertitle: Up with the flag!; (5) trumpeter (pl.); (6) face no. 1; (7) face no. 2; (8) face no. 3; (9) face no. 4; (10) hand, shielding from the sun; (11) raised hands of peasant children; (12) peasant woman with raised hand; (13) face no. 5; (14) unit in a line; (15) shadow of the flag; and (16) feet of the pioneer woman at her post.

These 16 motifs appear in the 52 shots of varying lengths, with the length of the shot varying between 5 and 73 frames. At the end of each line, the total number of frames per motif in the episode is listed. Admittedly, the adding up of the frames could also simply have a practical background in the process of film-making: when a director worked with available material and planned his editing at the workbench, without having first cut up any prints, it was helpful to know how many frames in total would be required. Perhaps all the material was first measured and registered before being divided up within the episode. One ought not to lose sight of the fact that Soviet directors working not long after the civil war had to budget their film stock.

Naturally, one of the first things of interest to analyse is to what extent the diagram and the film work correspond to one another. With ImageJ this can be accomplished faster and more clearly than previously, because instead of the conventional verbal description of motifs (as descriptive semantic units) active in a list or a table, individual frames from a video file can be exported and depicted as editing of the image. For this purpose all the frames of the film must first be available as individual images; then the relevant images can be loaded into the programme as a so-called image sequence. On the basis of the information in the diagram, one can then navigate to the relevant point in the film, which in this case can be pinpointed between frame 29,142 and frame 29,914 of the film print at hand. While the episode in the film is 771 frames long, a higher number, 905 frames, is given in the "Cifrovaja zapis'" diagram. The attempt to compare the episode in the diagram with the

Fig. 6.3 *Kino-Eye*: The "flag episode"

corresponding point in the film quickly makes clear that there is no complete match. Tsivian published the document (Tsivian 2004a, 2004b: 109) and determined, by comparing with the film, that the motifs of the table do not always match the sequence in the film and are also differently named. As Vertov had made mistakes in the description, Tsivian presumes that Vertov did not later compare the table to the film, in other words, that the film was not available to him when he made it: "Evidently Vertov worked on his table using editing notes, not the film proper, since in the film we see a peasant with a hand raised, but this is a man, not a woman" (ibid.: 111). These individual images are finally arranged one after the other and provide a summarised depiction of the episode (Fig. 6.4).

Fig. 6.4 *Kino-Eye*: All the individual frames of the "flag episode"

For Wurm's analysis of the document, on the other hand, it is not so much the exact matching with the filmic work that is in the foreground; rather it is the fact that through publication, the diagram has become an independent artefact, which also experiences an epistemological enhancement: "As a specific 'graphism', that is, as a graphic-numeric-literary arrangement of data, it enables the insights which go out to the spectator beyond the perception of the film itself" (Wurm 2009: 25). The author thus tries, among other things, to understand the visual impressions resulting from the diagram as clues to Vertov-specific montage procedures. For example, she writes that certain rhythmic or sequential structures and alternations result from the filled fields from the left to right (if one were to connect them with a line) (ibid.: 27). This consequently means that the subjects in the left-hand column must have been arranged in a certain way, perhaps from most to less important or according to some specific visual or semantic characteristics. Scepticism about Wurm's thesis is in place, as subjects are even listed that are not used in the episode in question at all.

Two Episodes from *Man with a Movie Camera* as a Table

For *Man with a Movie Camera*, Vertov used the same table form as for the "flag episode" in *Kino-Eye*. Astonishingly, this relationship has scarcely been dealt with to date. Apart from Barbara Wurm's essay, "Vertov Digital", there are no texts available on this subject, nor have any comparative analyses of the diagrams been published. Among other reasons, this could be because the tables for *Man with a Movie Camera* are handwritten and consequently difficult to read. The publication of Vertov's diagram for the film *Kino-Eye* in *Kino segodnja* can, in any case, be seen in the larger context of the general search for a new form of montage and the development cinema in the Soviet Union. Although no further publications of this kind followed, probably also because Vertov's status was becoming increasingly controversial, the tables for *Man with a Movie Camera* are an obvious attempt by the director to link to the first publication in *Kino segodnja*. A total of two tables for the film are available. The first table refers to an episode from the film's fourth reel (Fig. 6.5), the second to an episode from the sixth reel (Fig. 6.6).

The nine visual motifs are designated in this diagram as "active persons and objects", listed from top to bottom: (1) lens, (2) the man with the camera – different positions, (3) movements of light machines, (4) movements of individual facilities of a cable factory, (5) eccentric, (6) building's furnaces, (7) "Gentleman" trumpet, (8) movements of dark machines and (9) militiaman at the traffic light. All 31 shots of this episode are listed with their frame totals; the longest shot, with 130 frames, is devoted to the militiaman at the light.

The special graphic design of the individual numbers is noticeable here; they are not just written as numbers, but calligraphically enhanced. The number "0" in the first line has been till now a puzzle for Vertov research. Instead of a convincing explanation for its not continuous use in the diagram, to date there have been only

Fig. 6.5 *Man with a Movie Camera*: Episode from the fourth reel

the first hints of possible meanings. Wurm (2009: 28) reads this entry as a formal procedure, as a "consciously entered amalgam of 0 and 1", which could suggest dissolves. It is, however, more plausible that this is a correction by Vertov himself and that he used the 0 only as an overwriting of a 1 or 2 that had been entered earlier.[7] This assumption is backed up by the fact that nothing like it is found written in any other table. In addition, the table contains three subjects which are not present

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[7] At this point I would like to thank Petr Bagrov, GFF Senior Curator, for a stimulating discussion and significant clues.
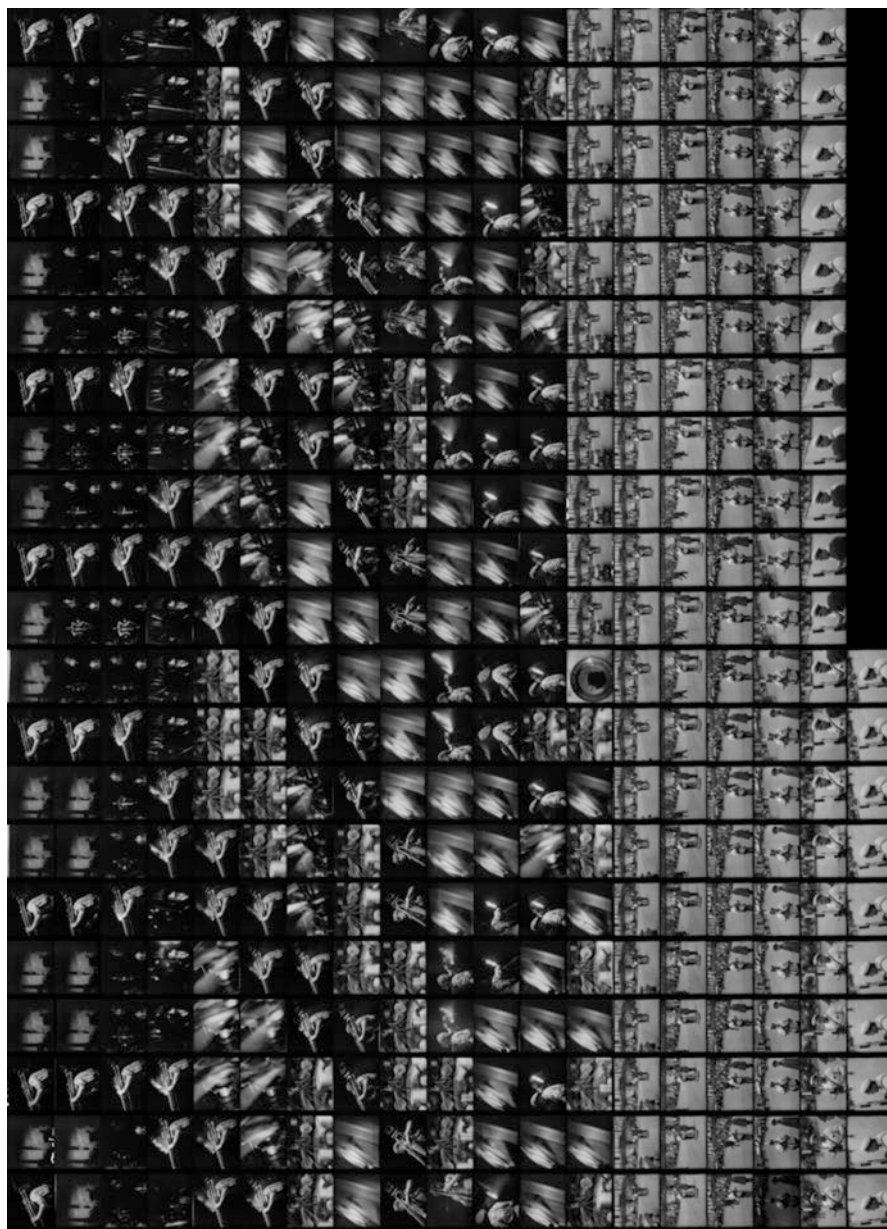
Fig. 6.6 *Man with a Movie Camera*: All individual frames for the episode in the fourth reel

in the episode, hence provided by Vertov with the word "pause" (pauza) in lines five to seven. The corrections and overwritings allow one to conclude that this is a draft for a design which had not (yet) been written in a clean version.

The content of the table corresponds to a rapidly edited part of the film, which contains a total of 141 shots in about 20 s (Fig. 6.6). After it has been located in the film, the spot can be visualised and the relationship with the diagram created. In the film, the episode has a total length of 388 frames. The unambiguous end and orientation point of the episode in the film are the shot showing the militiaman at the light. It is, by contrast, more difficult clearly to assign the first subject in the list, the man with the camera. In any event, by contrast with the table, there are over 100 additional shots of the cameraman in the episode.

A second diagram refers to the film's sixth reel (Fig. 6.7) and has not yet acquired any commentary. This table also contains a legend penned by Vertov, with the same text as the diagram for *Kino-Eye*. According to the current state of research, no further documents are known that refer to the first, second, third or fifth reels. On the left-hand side of the diagram 15 "active persons and objects" are listed (from top to bottom): (1) headlamps, (2) tram, (3) people. (4) square, (5) pendulum, (6) auditorium, (7) screen, (8) two eyes, (9) one eye, (10) light, (11) man with the camera, (12) lens, (13) train no. 1, (14) train no. 2 and (15) car. The episode consists of 41 shots, their lengths varying between one and eight frames. The word "pause" is applied to four subjects: the auditorium, the screen, the lens and the car, while the

Fig. 6.7 *Man with a Movie Camera*: Episode from the sixth reel

function is unclear; the director could simply have removed those subjects from the table. It is only possible to speculate about how this arose; did Vertov perhaps begin by listing the individual subjects in the left-hand column, only then choosing the shots in their lengths and entering them? In this way, the unused subjects could have been first marked with "pauza" and only removed in the final version. Since this term does not appear in the publication about *Kino-Eye*, this seems an insightful assumption.

A comparison between table and film is in this case even more difficult than in the previous. Firstly, one of the signs of the diagram's age is water damage; secondly, the episode described belongs to the reel of the film with the most rapid editing, the speed of which increases still further towards the end. The inventory described and the mere brief shots in the table nonetheless indicate that Vertov had here measured the last seconds of the film. The alternating combination of motif no. 11 (man with the camera) and motif no. 9 (one eye) can, however, not be identified in the GFF/Austrian Film Museum print of the film, only in the contemporary nitrate print preserved in Amsterdam. Its end is edited more elaborately than the GFF/Austrian Film Museum print, showing an additional montage sequence with Kaufman. In the table, only one sequence with the pendulum, man with the camera and eye motifs is noted (each only one frame long); in the film, the sequence appears a second time. In the film, the episode has a total length of 75 frames and consists of 35 shots. In comparison to the diagram, it has evidently been expanded and designed with greater complexity (Fig. 6.8).
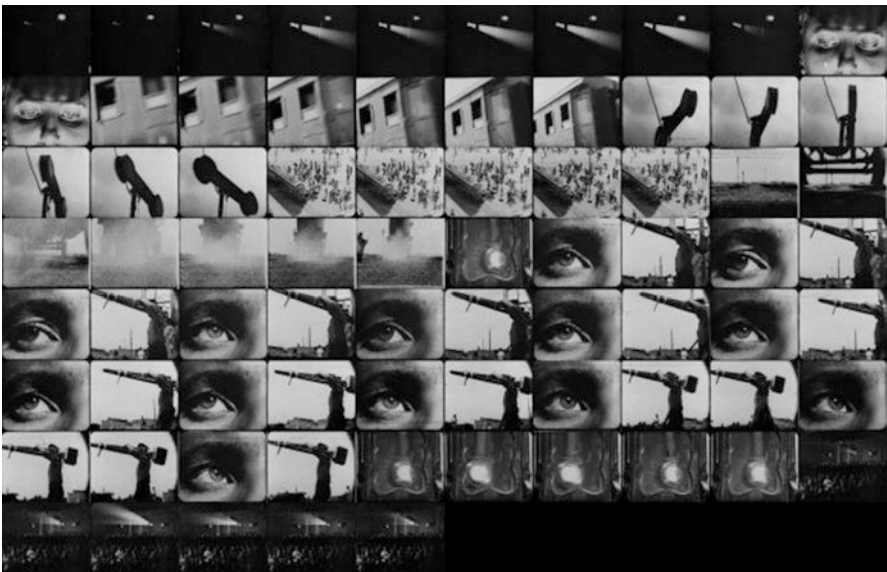

Fig. 6.8 *Man with a Movie Camera*: All individual frames for the episode from the sixth reel

The Visualisation of the "Creative Laboratory"

In order to be able to discuss the visualisations for the creative laboratory, a brief historical review is necessary. As is well known, from 1934, the number of Vertov's unrealised film projects began to mount. For the film historian Viktor Listov, the reasons for this include the director's "too honest and unfeigned enthusiasm", which, politically, was no longer called for:

> In the period between the 1930s and the 1950s, Vertov was not well served by his honesty. He prescribed the communist ideals to himself with such religious eagerness that he "missed" the point at which honest enthusiasm went out of fashion. The film-maker looked in amazement at the circle of his colleagues who were striving for personal prosperity with amazing cynicism, without forgetting, while doing so, to proclaim collectivist slogans. Hypocrisy became a norm of life. Vertov, who could not understand this, suffered a great deal from the human descent of his friends, students and colleagues. (Listov 2000: 192)

A few scenarios and sketched ideas for film projects attest to unrealised works, but Vertov's idea of a creative laboratory was also never implemented. Alongside many handwritten outlined plans for the organisational design of this project, a comprehensive text from 1936 exists.[8] Vertov always emphasised the absolute necessity of better organisation of shooting, certainly reinforced by his experiences during the production of his second sound film, *Three Songs of Lenin*, for the Mežrabpomfil'm studio. The demands of the meanwhile experienced film-maker are reminiscent of the first publications of the *kinoki*, in which they propagandised for direct, unstaged filming with a hidden camera and considered mobile camera units absolutely essential. Vertov, however, was already dreaming of future technical developments: "4. Both cameras, silent and with sound, should be linked to one another in such a way that one camera impede the other and so that shooting can begin without preparation and conflicting signals, so that the equipment is in permanent readiness and no special markings for synchronised procedures will be necessary" (Vertov 2008a [1936]: 306).

He envisioned the best-trained cameramen for sound and image, managing with compact systems and thus able to work together with optimal coordination. For it was necessary that the overall work on documentary shooting outside the protected environment of a studio be focused and organised: "10. In order to film human behaviour professionally outside the studio under natural conditions, all technical resources thus far found and developed by our group, the recording apparatus and the special equipment, must concentrated in one location. This is only possible under the conditions of a creative laboratory organised by us" (ibid.: 308).

As Vertov was familiar with the conventional problems of Soviet film production, he specified eight requirements, ranging from the organisation of personnel (creative squad) through the construction of the studio, to the concrete contribution of his laboratory to Soviet film-making. In his view, films should not simply be produced one after another; rather, the optimised use of film material and film development should enable many subject areas to be dealt with simultaneously in a

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[8] In the Vertov Collection, there are three diagrams; others may be found in RGALI and were published in Stat'i vystuplenija (cf. Kružkova 2008, p. 305 and 307).

Fig. 6.9 Creative laboratory I
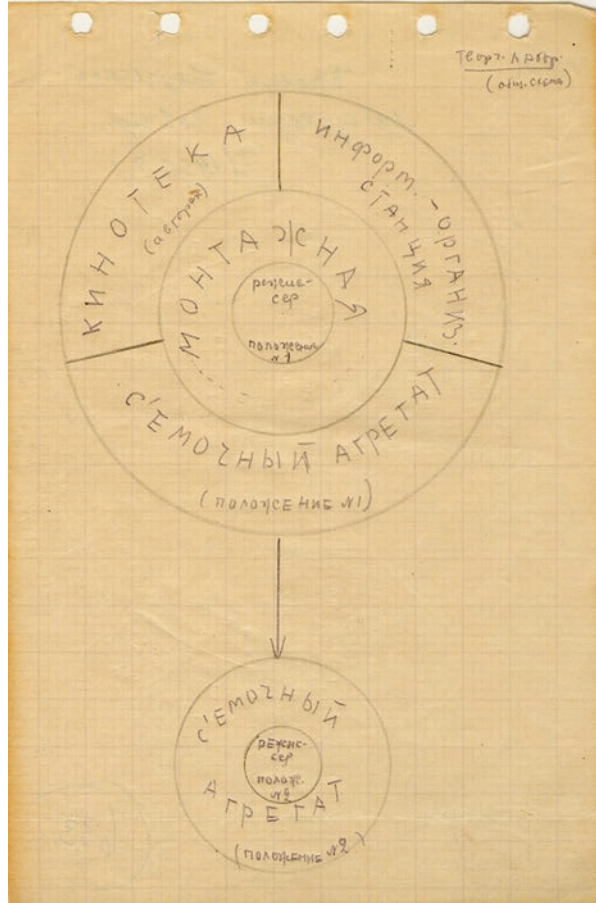
continuous process. The construction of the studio, that is, the basic infrastructure, was described by Vertov in four parts: a mobile film unit, an editing unit, an information unit and an organisational unit. At least three such drafts have survived, all from 1936 – at this point it had already been 2 years since his last film. He directed the documents at the Mežrabpomfil'm studio, probably also in order to prove the organisational-, economic- and content-related skills of the director Vertov and thus put himself in the running for new assignments.

All three diagrams have a circular construction, a form preferred by Vertov in the late 1930s, as attested to by other handwritten examples.[9] In the first diagram,[10] the director sketched a two-part structure, consisting of a mobile unit and a larger stationary unit (Fig. 6.9).

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[9] Archival documents with signatures V 147, V 149 and V 151, V 152, V 153, held in the Collection Dziga Vertov at the Austrian Film Museum.

[10] Archival document with signature V 131, held in the Collection Dziga Vertov at the Austrian Film Museum.

Fig. 6.10 Creative
laboratory II

In the centre of the superordinate unit is the director's editing room, surrounded by three further departments: a stationary recording apparatus, an information station and a film library. Connected to this facility is a smaller recording apparatus, which Vertov envisioned as a fully equipped mobile mini-bus. There, too, the director standing at the centre holds the reins. In this relatively straightforward structure, encompassing all the important stages of film production (with the exception of the laboratory), Vertov's inclination towards the systematic organisation of collective film work, intended to produce more scope for creativity, is expressed here with great clarity (Vertov 2006 [1947]: 197). The tasks are focused and optimally divided, with the archive, as well as the current production and administration, at the disposal of the director, who has access to all information and can immediately process the material in the editing room. In a formal sense, the parallels to a television broadcaster or the online editorial department of a newspaper are strong.

In the second organisational plan,[11] Vertov described the already mentioned recording apparatus in its technical details (Fig. 6.10).

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[11] Archival document with signature V 132, held in the Collection Dziga Vertov at the Austrian Film Museum.

This was to be able to exist as a self-supporting unit, hence the power supply's position in the centre of the diagram, around which the four further units are arranged in concentric circles: the sound apparatus, the silent film apparatus, the lighting and the transportable laboratory. These units, in turn, are characterised by specific features; the silent film apparatus thus has a mobile crane, whereas the sound apparatus is linked to a bicycle and a detachable vehicle. Vertov apparently envisioned silent filming for long shots or travelling shots, to which sound would later be added, while the sound recording equipment had to be mobile and easily transported. The laboratory, too, connected to a mobile editing room, is conceived as a mobile unit, while the lighting apparatus is to be equipped with special technical devices. The entire apparatus is ultimately connected to a tractor, guaranteeing additional mobility: "A unique model for the mobile and universally connected production of moving pictures. Produced at a time of bureaucratic impediments and administrative paralysis" (Austrian Film Museum et al. 2006: 198).

The third draft[12] is especially complex in its design; according to Tode and Wurm, it illustrates the necessary considerations and preliminary work for the organisation of the creative laboratory (Fig. 6.11).

Eight additional entities are marked in around an accountable person at the centre, Comrade Usievič. In a manner of speaking, Vertov assigns the most important partners for the administration of the ambitious project to Usievič. Boris Kanter, who was the director of Sojuzkinochronika in the 1930s,[13] is responsible for three areas: he determines the material chosen, organises the necessary viewings and is generally in charge of the assignment of tasks. In addition, Vertov wanted to work with four film studios, in order thus to utilise their infrastructure: Mosfil'm was to make an editing room available and Sojuskinochronika and Detfil'm were to assist with necessary machinery (e.g. for film developing). The established cameraman Surenskij was named by Vertov as an advisor. Vertov was more euphoric about the prospects of implementing the creative laboratory than the actual work situation would have justified. Evidence of this may be found in the following diary entry of 13th November 1936:

> We are confident that our experimental garden-laboratory will flourish. We're certain that we shall offer our country beautiful fruits from this garden, if only we are given the chance to grow our films in the way we know and understand, under the special conditions proper to precisely this type of film. We're not afraid of any creative difficulties. We love them; we delight in overcoming them. (Vertov 1984b [1936]: 206)

But the reality was different and the beginning of the end of Vertov's artistic freedom and career was approaching. Gaining acceptance for his own scripts and film ideas became constantly more difficult and frustrating for him from the mid-1930s, although in 1935, he had still been awarded the "Red Star" decoration.

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[12]Archival document with signature V 133, held in the Collection Dziga Vertov at the Austrian Film Museum.

[13]I am very grateful to Peter Bagrov for this information.

Fig. 6.11 Creative
laboratory III
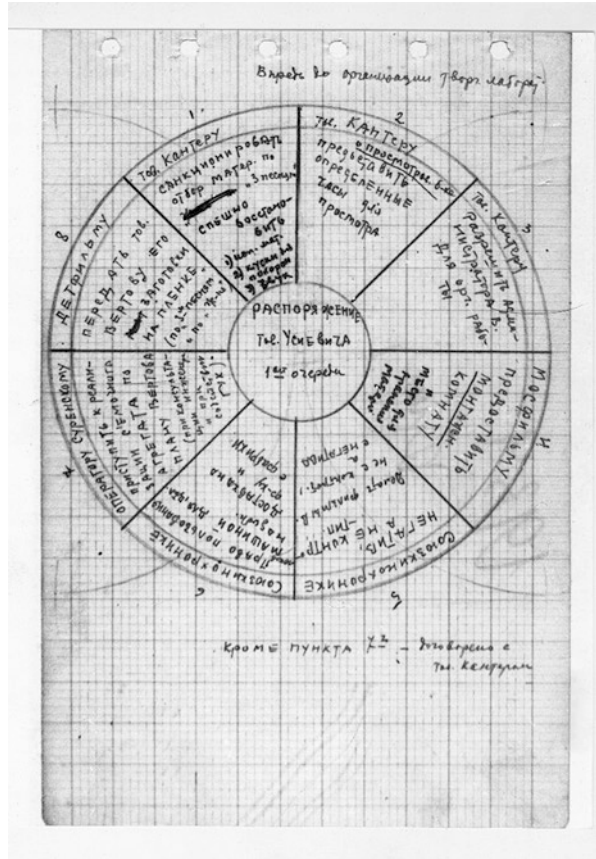
All three diagrams attest to the detailed consideration and development Vertov
devoted to every aspect of film production. In his visualisations, the director found
a vivid way of depicting the individual subsections and their linkages in a clear
manner. In choosing the circular form, Vertov was distancing himself from the tra-
ditional introduction of hierarchies, instead placing organic cooperation and the
joint operation of different units in the foreground. Perhaps it was precisely for this
reason that the suggestions were viewed with scepticism; at a time when the politi-
cal situation was pointing ever more sharply towards absolute leadership, demo-
cratic forms of organisation could only meet with rejection.

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Chapter 7
From Filmic Form to Meaning

> Most importantly, films can be analysed in terms of their construction and their relation to their makers: analysis in this direction is mostly ignored in theorizing about films. (Salt 1992: 23)

Vertov's works always revolved around the documentary, for it was only here that for him both the truth and the essence of the people in the Soviet reality were revealed. The fact that the film-maker turned precisely to film and did not, for example, work as the editor of a daily newspaper may be happenstance, or it may be traced back to Vertov's active interest in new media. It is, however, just as plausible to assume that Vertov recognised in film the potential for revealing his processes without detracting from their effect – on the contrary; the director felt that films could actually gain in fascination through the demonstration of the processes of craftsmanship. Vertov transmitted the idea of film work as a demonstrative activity and accentuated the professional abilities of his film team. Above all, in his early films he also presented his colleagues on the screen, where they were shown practising their professions in a manner almost reminiscent of folk art: "The activity of a 'filmer', e.g. the cutter at work editing the material shot is expressly equated with the finishing of textiles and the sewing of fabric parts" (Drubek-Meyer and Murašov 2000: 8). This comparison runs through the history of editing and is also mentioned by Walter Murch, who sees it as a possible reason for the high proportion of women in the editing profession (Wright 2009).

The "demystification" of the cinema can thus be formulated as a key concept of Vertov's theory of film. That this important aspect vanishes from Vertov's films from about 1930 on may be seen as evidence for the increasing curtailment of the director's artistic freedom. In order to understand Vertov's style, it is important to bear in mind that the director only infrequently had the freedom to implement his own themes for his films. Many of his films were made under assignment for the Soviet government or other official agencies (e.g. Mossovet or Gostorg). It is therefore, in principle, not very expedient to approach them from the point of view of their subject matter. If Vertov had been concerned with a straightforward transmission

of content, he could have fallen back on tried and true narrative or demonstrative film techniques. Though Vertov was a documentary film-maker and rejected the feature film consistently, he, too, sometimes employed classic film techniques in order to present his subjects and make his statements clear. The most obvious is his satirical use of these models in *Man with a Movie Camera*. The action develops over the course of a day, which may be seen as a reference to the then very popular genre of the city symphony. But in other films, too, a closer look reveals small narrative sequences.

Tsivian characterises Vertov as "incredibly quarrelsome" (Tsivian 2004: 5), and, indeed, after reading his lectures, articles and diary entries, an image emerges of a man who spent a lifetime in battles with film studios and the Party – and held that his method was the only conceivable way to transmit political ideas and socially relevant subjects to his audiences. He thus suffered all the more under the difficult working conditions, which usually meant a restriction of resources, both financially and in terms of personnel, always having to adapt his approach anew. Shooting new material was a privilege; more often one would have to make do with what was available. Vertov even ultimately transformed the limitations of the material into an artistic programme, his film library.

One can thus say with confidence that the progress of Vertov's professional career had a marked influence on his style and his work method. As is known, he began as an employee of and finally as director of the Soviet newsreel, developing his style with a technique that film-makers today would perhaps refer to as "found footage". At least Vertov's methods, according to our contemporary understanding, had more in common with the technique of a film-maker who works with "found" material than with that of a typical newsreel editor. For that reason it is no coincidence that Vertov should be discussed in the context of terms such as archive and, especially, database. The picture of the director as a collector of filmed key images and of Svilova as the user (and manager) of his data archives is explicitly drawn in *Man with a Movie Camera* (Fig. 7.1).

This material is thematically indexed by keyword and placed on shelves, as Svilova does here under the term "movement of the city". Nearby are further labels: factory, car, bazaar and magician. Even if we cannot read the relevant notes on the

Fig. 7.1 Elizaveta Svilova arranges strips of film on a shelf labelled "movement of the city"

paper, it may be assumed that they contain a more precise description of the content, perhaps also the location at which they were filmed and their length. The metadata is thus physically linked to the data and neatly arranged. The editor and the director can then see at a glance how much material is available on a certain subject and whether it will be necessary either to film further or to consult an archive. It is not surprising that Manovich dubbed Vertov a "major database film-maker" of the twentieth century: "Man with a Movie Camera is perhaps the most important example of a database imagination in modern media art" (Manovich 2001: 239). By way of contrast to usual film-making practice, in which the script determines the shooting, here the shots are filmed first and then brought linked to each other (ibid.: 240). Even more than that, in the greatest variety of juxtapositions, they can make new statements possible, convey new ideas and unfold new visual impressions. Manovich develops his thoughts further: "Records drawn from a database and arranged in a particular order become a picture of modern life – but simultaneously an argument about this life, an interpretation of what these images, which we encounter every day, every second, actually mean" (ibid.).

What Manovich is really saying is that through the constant rearrangement of the individual pieces, Vertov and his team could always recognise new relationships between the individual shots, whether by virtue of visual characteristics or the content of the image. The constantly accelerating pace of life at the beginning of the twentieth century, perceived as ever more complex, can thus be more easily grasped, or at least arranged in different variations. Manovich cites *Man with a Movie Camera* as a decidedly astonishing catalogue of filmic techniques of the time, with fade ins and fade outs, freeze-frames, time-lapse and slow motion, dissolves and double exposures (ibid.: 241). The catalogue, however, transcends that film; for Vertov it spans his entire body of work, with shots forever re-emerging in new contexts. A systematic registration of this creative recycling still lies ahead; I have indicated a couple of concrete instances earlier in the text (under the heading near duplicates).

Vertov's works are based on a segmented type of construction; his films can thus best be deciphered through analysis of the formal elements and their functions. Naturally, the use of formal processes is not limited in particular to Vertov but is in the tradition of Soviet film-making of the 1920s and 1930s. The films of Kulešov, Pudovkin, Dovženko or Eisenstein represent, in principle, the view that content and movement are not transmitted (only) as discrete actions *within one* shot or as a succession of shots but far more through the confrontation, combination and parallel editing of *individual* shots. This refers above all to films from around the year 1930, for example, *A Simple Case* (1932, Vsevolod Pudovkin), *Arsenal* (1929, Aleksandr Dovženko), *Earth* (1930, Aleksandr Dovženko) and *Ivan* (1932, Aleksandr Dovženko) but also to *October* and *Old and New* (1929, Sergei Eisenstein). Popular productions, too, took formal inspiration from the avant-garde film, like *The Living Corpse* (1929, Fedor Ocep) or *The White Eagle* (1928, Jakov Protazanov). Although the theoretical and practical concepts of the individual directors naturally differ, it is possible to determine in general that formal processes such as experimental

montage, as well as extremely rapid cutting from shot to shot, were a hallmark of the Soviet cinema of the time, which took a position contrary to that of the conventional European and American film.

Investigations such as the present one arrive at their results not only through a process of analysis, but also through a repeated viewing of the films. The same images have different meanings in Vertov's films; therefore the shots preceding and following them are so important for their signification. When the meaning changes due to the position in the film, it means that Vertov did not have to shoot a replacement image; instead, he learned to be creative with a limited number of motifs.

It may be assumed that Kulešov's subsequently famous experiment was initiated, or at least inspired, by the lack of choice in the available film material. He was one of the first professional directors engaged by the newly founded Moscow Film Committee for the re-editing of pre-revolutionary films for the local market (Tsivian 1996: 332). At this time it was still necessary to import many films from abroad, as local production was very sluggish and the cinemas still needed product. This practice of re-editing was widespread not only in the Soviet Union; the Soviet film productions were also reworked abroad, often by renowned directors. The Russian Formalists, too, recognised the relationship between the activity of reworking foreign film prints, seen as necessary, and the impulses emanating from it that in turn influenced their own work. Together with Šub, Eisenstein gave *Dr. Mabuse the Gambler* (1922, Fritz Lang) his own interpretation, although at the time he was just finishing his own film, *Strike* (1925, Sergei Eisenstein) (ibid.: 336). Georgij and Sergei Vasil'ev – known as the Vasil'ev brothers – were also employed as cutters for this re-editing work and thus not only became very familiar with Western cinema but were also influenced in their own work by the intensive editing tasks (ibid.). It was Sergei Vasil'ev who, in his book *Azbuka kinomontaža* (The ABC of Film Editing) wrote: "[...] the meaning of any scene can be radically altered and [...] the meaning of any piece of art depends on what other pieces of film it is juxtaposed with" (ibid.: 338).

As Tsivian explains, the interests of the Formalists and especially the LEF group (Left Front of the Arts) can be gauged by studying the press. As the article by film critic Viktor Percov attests, there were even thoughts of deploying films about films as a visual tool to educate the public. Tsivian quotes Percov's suggestion, which includes an enumeration of formal criteria: "The shots of such films will be similar to quotations, analogies, emphasis or examples of regularities. Each intertitle of a film like that will work as a thesis. By intercutting some most representative fragments, this film-as-review will be able to compare different styles of direction and add filmic commentaries to them [...]" (ibid.: 337). The suggestion made here by the critic, a short snapshot of the style, is a little reminiscent of the adaptation of films for trailers and could be an exciting project, from which a formal analysis could emerge.

Style does not mean only investigating analogies of images or of pictorial composition. In our case that would mean that Vertov created filmic rhythm primarily via concrete visual similarities (in the sense, e.g. of a match cut). Although there are certainly also such procedures in his films, one may assume that Vertov's visual

rhythm has a more complex design, involving meanings and their semantic information not just from film to film but also constantly within a film. Vertov changed the system of signifiers, as Stephen Crofts and Olivia Rose observe in *Man with a Movie Camera*: "The film's radical play with signifiers demonstrates ad absurdum the fallibility of trying to impose on it any system of signification which denies heterogeneity and contradiction. Almost as soon as the film establishes a recognisable 'system' for its ordering of shots, another 'system' undercuts that categorisation" (Crofts and Rose 1977: 20).

The psychologist Hugo von Münsterberg proceeded from the assumption that movement was a construction of the spectator (also Redfern 2007). Vertov makes use of this assumption in his "interval" term, with which the first part of this chapter will deal. To date, research on Vertov has approached this central term only theoretically. This is not only because too few concrete starting points were available, but also because of the limited possibilities of formal analysis. To perceive a process as important for the interval as the intensity of movement in a film, to systematise it and depict it for analysis, is far beyond the human capacity for orientation. It is therefore in this section that the potential for computer-aided film analysis and visualisation will be presented, both of which, in turn, offer explanatory approaches for the specifically Vertovian work method. Only when an overview of the design of movement intensities within the shots has been attained is it possible to discuss to what extent the use of documentary material also translated into a limitation of Vertov's freedom of design.

As a further proposition, one could formulate the idea that Vertov's messages are mainly transmitted by means of formal elements, such as faces seen in close-up. The human face in the Russian (film) avant-garde has a fundamentally different meaning to what it has in the later Soviet cinema or in films from the West at the time. An exemplary illustration of this may be seen in Kulešov's training of actors. The body, in the spirit of the French movement educator François Delsarte, then very popular in the Soviet Union, should be divided into its individual components, which should then be separately controlled. The human face constituted a problem for Kulešov, for how could an avant-garde actor guard against the mysticism of psychologism (Yampolsky 1994: 61). As the film scholar Michail Jampolskij describes it: "Kuleshov reluctantly resigns himself to its existence, but he points out that the face is nothing in comparison with the possibilities offered by the hands, the ideal analogs of mechanical levers" (ibid.).

The director then suggests a machine face, which is in turn subdivided into smaller units which can and must be individually trained. A good example of the results of Kulešov's work with actors may be seen in *The Extraordinary Adventures of Mr. West in the Land of the Bolsheviks* (1924). In comparison with the other facial features, the eyes are the most mechanical part of the face and should be trained to move without the slightest jerkiness. Yampolsky goes as far as speaking of a transformation of the human into a film camera: "[...] the human being in its mechanical aspects is transformed by Kuleshov into something of a movie camera" (ibid.: 64). Similar thoughts may be found in Vertov's early manifestos and photocollages, for example, the eye with Vertov's portrait as its pupil. But if one investigates his films

in search of faces in close-up, one discovers in them not necessarily the analytically absorbed gaze, nor the portrait of machine faces, but, rather, the opposite. A case study involving *The Eleventh Year* and *Kino-Eye* will therefore be devoted to this subject.

In the last part of the chapter, the varying treatment of political figures in the films T*Three Songs of Lenin* and *Lullaby* will be dealt with. As a Soviet film-maker, Vertov, like his colleagues, was compelled to declare his attitude to Lenin and Stalin. Vertov exuberantly expressed his veneration of Lenin, while his attitude to Stalin remained much less unambiguous. Although Stalin was depicted in very positive images as the father/hero of the female section of his people, there is a falling off from the editing of Vertov's hitherto virtuoso and formally dense works. Even *Three Songs of Lenin* seems, at first viewing, to be more linear and emotionally affective than all previous films. But Vertov's last two films, under closer scrutiny, differ in significant ways. One could posit that Vertov's poetic documentary film, with its formal structure, survived at least until the mid-1930s. Only after that does his approach fundamentally change, which is possibly due to the participation of Svilova becoming increasingly prominent. Another explanation could be the couple's relenting to the required artistic guidelines of socialist realism. These could be summed up with terms like partiality, reflection, the typical, the romance of the revolution, the positive hero, and native popularity (Günther 1984: 18). Only a formal analysis of his late films, *Three Songs of Lenin* and *Lullaby*, can give answers to such questions.

Movement: Vertov's Theory of the Interval

The interval is, as already mentioned, a much-discussed but really quite imprecise term within the academic study of Vertov. One of the reasons for this is often the imprecise acquaintance with the films as primary sources, though Vertov himself also never unambiguously formulated his interval theory, or, rather, he modified it over the course of time. This is not very surprising, as through his activity in film he gradually refined his skills and integrated them in his theoretical considerations. To begin with, one ought to recall Vertov's core statements on this subject and test them, especially in the sense of practical application, on the analysis of his films. Without doubt, the interval can be claimed firstly as a central component of the *kinoglaz* concept and, secondly, as above all referring to filmic movement.

In "WE. Variant of a Manifesto", Vertov remained somewhat vague in his definition, which can, above all, be attributed to his lack of film experience. At the time of publication, in 1922, Vertov had only just made his newsreels *Kinonedelja* and *Kinopravda No. 21* and had not yet tested his creativity on longer films. According to Vertov's film theory, a film work consists of individual shots, which, with the aid of intervals, are organised into episodes. Vertov's formulation, in very general terms, stated that movement in film, which was essential for the creation of action, was generated by intervals: "It is they (the intervals) which draw the movement to a

kinetic resolution. The organization of movement is the organization of its elements, or its intervals, into phrases" (Vertov 1984a [1922]: 8). Although in this text Vertov described the intervals' organising of the larger units (phrases), it may be assumed that he was implicitly referring to the shots.

Vertov first became more concrete in a later essay, in which he built on the knowledge he had acquired in the previous years. The film-maker then summarised how, in the "school of *kinoglaz*", directors and cinematographers could design the movements and their transitions both between shots and also within shots. The visual interval, accordingly, is composed of the correlations of the shots' formal characteristics. Among the most important are the correlations of shot size, camera perspective, movements within the image, contrast of light and darkness and shooting speeds (Vertov 2008e [1928]: 161). "Proceeding from one or another combination of these correlations, the author determines: (1) the sequences of changes, the sequence of pieces one after another, (2) the length of each change (in feet, in frames), that is, the projection time, the viewing time of each individual image" (Vertov 1984d [1929]: 90). In essence, Vertov was here speaking of visual rhythm, with the interval as a collective term for various procedures dealing with their creation and shaping.

In the following chapter, using selected examples, the correlation of movement within the frame in *The Eleventh Year* will be investigated. This film lends itself to an analysis of this kind, as I have annotated the intensity of movement manually, while Manovich has calculated it with computer support. Using visual depictions, cursory discussion will focus on where the potential for future investigation of motion detection lies. Subsequently, processes to do with the manipulation of time, like reverse motion, time-lapse and slow motion are discussed. Using *Man with a Movie Camera*, the frequency of their appearance and correlation with shot length will also be visually depicted.

Movement Within the Image in The Eleventh Year

The investigation of movement within the image constitutes a considerable challenge for film analysis. The term is a very general one and incorporates both the intensity and the direction of the movement. While establishing shot length is a cornerstone of quantitative analysis in academic film studies, the groundbreaking research that builds on it is currently in the area of movement measurement. Alongside Manovich, the research conducted by psychologist James Cutting, whose analysis was carried out on a body of Hollywood films, ought to be mentioned in this context. His aim in this was to gain understanding of long-term changes in formal design. In his work, he asks principle questions, such as: Have shot lengths changed since cinema began? Is there a relationship between intensity of movement and shot length, and if so, what is its significance for audience perception (Cutting 2011, Cutting et al. 2013)?
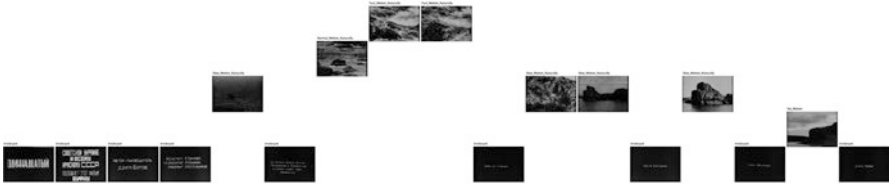
Fig. 7.2 Manually annotated intensity of motion in the opening sequence of *The Eleventh Year*
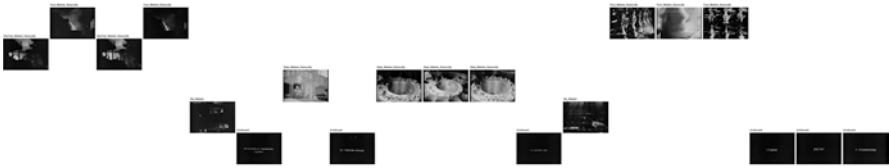

Fig. 7.3 Motion-intensive moment in *The Eleventh Year*, manually annotated

The following graphs deal with the visualisation of the manually annotated intensities of movement as motion types in the film *The Eleventh Year*. These, in turn, are based on the individual shots, of which the first frame is depicted in each case. The motion types are shown along the x-axis, which means the higher the frame's position on the y-axis, the more movement appears in the shot. On the x-axis, the film runs from left to right, beginning with the film's opening titles. The intertitles are all located at the lower end of the graph, as their motion type, irrelevant, has a value of zero. In accordance with their gradually increasing intensity of motion, the shots in the graph from the beginning of the film in Fig. 7.2 are annotated with normal motion/natural and fast motion/natural.

In Figs. 7.3 and 7.4 are two shots with relatively active patterns of motion as extracts from the overall graph, with the "hammering" episode one of the most marked spots in terms of editing and movement.

In Fig. 7.5, the illustration of the electrical pylon has unfortunately been rendered rather small, but the pattern is nonetheless still recognisable. This should emphasise the fact that the intensity of motion correlates with the editing – shots with more motion alternate at first with more static shots. That may be seen from the alternating images above (more movement in the shot) and below (less movement in the shot) being arranged from left to right along the y-axis. At the end of the illustration, this pattern gives way to a different one: the shots contain less movement and can now only be found at the lower levels. For this, either Vertov could have used the faces as freeze-frames (as he sometimes did, e.g. in *Man with a Movie Camera*) or they were motionless for other reasons, perhaps people who were listening intently or mourning (as in *Three Songs of Lenin*). The latter variant seems less likely when one knows the film in question and glances at the image content. A conceivable solution for this phenomenon is the shortening of the shot lengths,
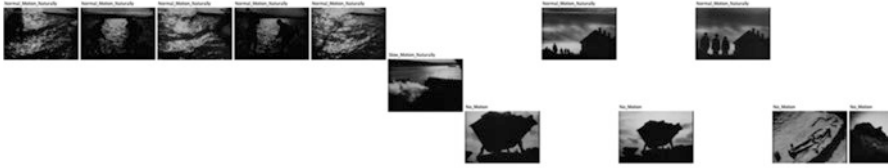
Fig. 7.4 Motion pattern from the manual annotation of *The Eleventh Year*, "hammering"episode

Fig. 7.5 Motion pattern from the manual annotation of *The Eleventh Year*, "electrical pylon" episode

which must naturally be checked against the film itself. Although it is possible to make isolated observations of this type, this method does not enable recognition of a general trend towards a pointed control of motion in the film.

A further graph in Fig. 7.6 shows, by contrast, an interesting trend towards the end of the film; a clear heightening of the motion intensity to a level of minimum movement (normal/natural) can be seen, below which the remainder of the film does not drop.

The previous visualisations, reduced in their information and unevenly more difficult for purposes of orientation, should be borne in mind only for purposes of comparison (Fig. 7.7). With colour coding, however, it is still possible to gain an impression of the distribution and clustering of motion types in the film.

Since the assignment of shots to motion types requires a semantic evaluation carried out by humans, an automatic investigation of motion patterns requires a different type of access. The basis of computer-aided calculation is the change in the values of light and dark between a single digital image and its successor – a visual characteristic that Vertov determined could be a possible category of the interval. Prior to this, each shot must be analysed with the help of an algorithm, in order to calculate the median motion per shot. In principle, it ought to be kept in mind that algorithms, too, are determined according to certain formal criteria and are modified according to result. One even refers to an algorithm "learning". For this reason, it is mainly large quantities of data that are advantageous, as they enable a computer-aided process of analysis to be trained; optical character recognition of handwriting comes to mind as an example.

Manovich (2013) developed a suitable method for this using two of Vertov's films. One first determines all shot boundaries using automatic detection, following which the difference in image content of each two successive frames is measured (in pixels; for example, the difference in image information between the following and previous frames). From this difference the median brightness is calculated, this process carried out for all the frames of a shot, the values added up and the result divided by the total number of frames.

Fig. 7.6 Motion pattern from the manual annotation for *The Eleventh Year*, towards the end of the film the level of motion remains high to a stable degree

Fig. 7.7 Reduced visualisation of the annotated motion pattern for *The Eleventh Year*; each shot is colour-coded according to degree of motion

Cutting, on the other hand, uses the superordinate term visual activity for every type of movement: "Motion is the optical change created by moving objects, people, and shadows; movement is that change created by camera motion or gradual lens change" (Cutting 2011: 571) A visual activity index (VAI) is calculated from the difference between neighbouring frames, and from it such an index is established as a median for every pair of frames throughout the entire film. The greater the VAI, the more movement in total is present. The motion intensity is similarly calculated for the individual shots, above all with the aim of relating them to the length of shots; for example, in order to establish whether there is more movement in shorter shots than in longer ones. This can inform whether these filmic designs have changed over the years, which Cutting illustrates in graphs and explains in his analyses (ibid.).

For the computer-aided analysis of movement, calculated, as in Manovich's case, by the changes in pixels between successive frames, this undifferentiated access is overall a pragmatic method and useful for initial investigations. Unfortunately, a technical blind spot, for example, in connection with the compression of digital data, also becomes clear. Cutting explains that he calculates individual frames from the available DVDs in order then to conduct a computer-aided analysis of them. Here, in some cases, he expressed himself critically regarding the artifacts for which he holds the inadequate digitisation responsible. It is actually losses due to encoding that are responsible here and they are inevitable when using the MPEG-2 standard for encoding the video for DVD. Only two of the problems thus arising are mentioned here: overlapping frames and the high compression of the colour space. In brief, if the method involved digitising film prints as individual images and using them for analysis, it would constitute the ideal approach for research of this type.

Manovich's results (the averaged values) are subsequently applied to the entire course of the film and are visible both as bars and as numerical values in the graph. Longer bars mean more movement, shorter bars less movement in the relevant shot. This process shows only the change in visual information per shot and is independent of the source of the movement, whether a camera movement, animation, or a moving object. In addition, the precision of these calculations is naturally limited, as the data available, due to the state of preservation, is not free of visual interferences (noise); distortions to the result could emanate from an erratic frameline, dust or projection damage. For this reason, the difference even between the frames of static shots is not zero, although it really ought to be. This material-dependent noise cannot be determined and subtracted through some simple procedure. In any event, the values for the intertitles, at least, are manually set to zero, as a lack of movement is the assumption here, in order not to obtain any distorted results.

This procedure is nonetheless sufficiently significant in an initial sense, and adequate enough for this type of investigation, for statements to be made about whether there is an increase or decrease in movement within the frame over the course of the film. In two detail illustrations (Figs. 7.8 and 7.9), the movement patterns can be recognised more clearly. Depicted is a representation of the calculated intensities of motion of individual shots from *The Eleventh Year*. The film runs from left to right along the y-axis, with each shot represented by a single frame.

Under the respective pictures, the intensity of the motion (as a median value of the change in brightness) is shown as a bar. The more motion intensive a shot is, the higher the value and, correspondingly, the longer the bar. At the beginning of the film the intertitles are at a level parallel to that of the shots; the faster the water of the Dnieper River moves, the longer the bar under the frame is. At the end of the film, by contrast, the overall intensity of motion within the shots rises, alongside the frequency of cuts, which, however, cannot be depicted in this graph.

When one compares the manual annotation of motion types with the data from the computer-aided analysis, a similar visual depiction sometimes results, despite the different approach. To facilitate comparison, the manual annotation has been rotated 180 degrees horizontally in Figs. 7.8 and 7.9. In a first graph (Fig. 7.10) the trend lines at the beginning of the film match up very well.

Fig. 7.8 Calculated motion intensities for the beginning of *The Eleventh Year*

Fig. 7.9 Calculated motion intensities for the end of *The Eleventh Year*
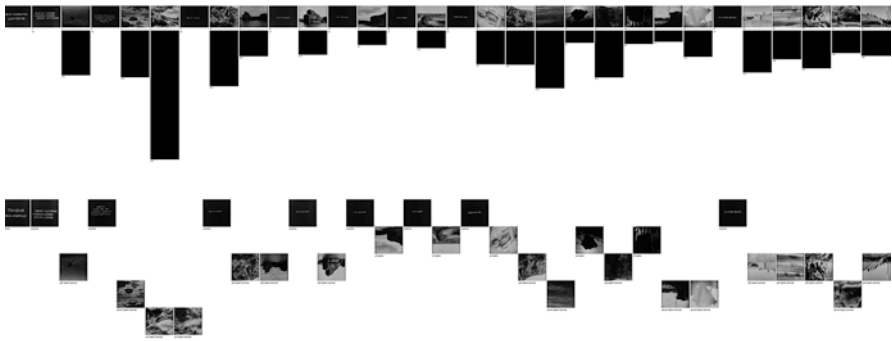

Fig. 7.10 Comparison of the calculated and manually annotated motion patterns in the first reel of *The Eleventh Year*

The differences begin to show up when human vision judges a shot to be static, but an algorithm identifies differences in the pixels (e.g. through the flickering of an image due to projection speed or poor print quality) and the result simulates movement. In the graph (Fig. 7.11), it can be seen that shots that are annotated as static, for example, the wagon, the Scythian, and partly the worker, are calculated by the computer programme as shots with motion. This may be seen by the black bar under the frame image.

These explanations do not serve to assess one result as more correct than the other, rather, they should point out the differences in the methodology and demonstrate them visually. However, experience teaches that with historical material that bears the marks of its age (scratches, dirt and print damage) an automated analysis will feign a clarity and power of discrimination which is illusory. Sometimes the human eye is in a better position to determine which of an image's visual characteristics should be ignored and which must be taken notice of and annotated in order to arrive at a meaningful result. It is, however, always true that a manual annotation requires a discussion of categories, while a computer-aided calculation will always run according to the same parameters in the computer programme and thus, despite the blurriness mentioned above, can make the analysis of various films a swiftly accomplished task.
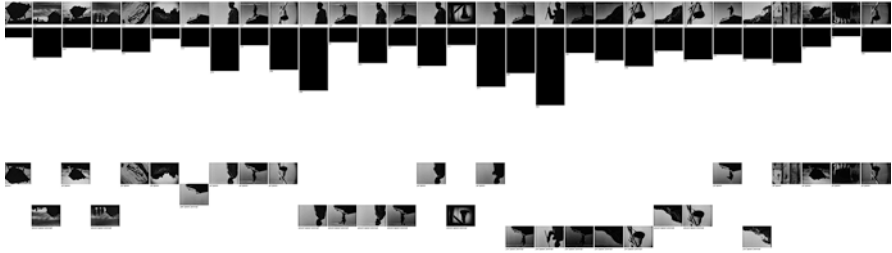
Fig. 7.11 Comparison of the calculated and manually annotated motion patterns in the first reel of *The Eleventh Year*

In the future, automated analyses will replace a calculation of the grey values of shot differences with the detection of motion. This so-called motion tracking is a technique that has already been in use for a long time in the film industry. For it, one can make use of processes employed by certain codecs for the compression of video files. Manovich explains: "For example, MPEG video codecs use automatic motion estimation to compress video. MPEG-7 standard for video metadata also includes [a] motion activity descriptor designed to provide metadata about the type of movement" (Manovich 2013). At the same time, specialised software for animation and visual effects suggests itself, offering manual or automatic methods of recognising motion (ibid.).

Manovich uses the assistance of animation software for the recognition of motion to carry out a sample procedure on a shot from *The Eleventh Year*. As he writes, this method has so far been most suitable above all for tracking long movements of large objects which can thus be optimally recognised, as the following example of a Vertovian crane shot shows (Fig. 7.12). To begin with, the movement of one shot is dismantled into a sequence of 167 images. In the upper part of the illustration, we see first every 21st frame, arranged from left to right and from top to bottom. Each individual image in the lower part of the visualisation is the result of the calculated median values of ten images. The movement is thus depicted via their presence or absence and their duration. If a movement is fast, the depiction will be blurred; if slow, the contours will be darker and sharper. On a trial basis, Manovich calculated groups of ten frames and collected the individual visualisations.

Such step-by-step approaches (in groups of frames) to the depiction of movement in the image are meaningful for the recognition of the change of movement. Manovich sums up once more: "This visualization allows us to see more clearly the changing speed of the relative movement of the crane (I say relative because in reality the crane stands still, and the camera pans past it). The images with a lot of blur correspond to faster movement (beginning and end parts of the shot); the sharper images correspond to slow movement (middle part of the shot)". (Ibid.)

Visual experiments such as these are presented not only as indicators of future possibilities for film analysis but should also be grasped in relation to Vertov's understanding of film. The film-maker was not only constantly interested in new technical developments but was often an active participant in them with his team.
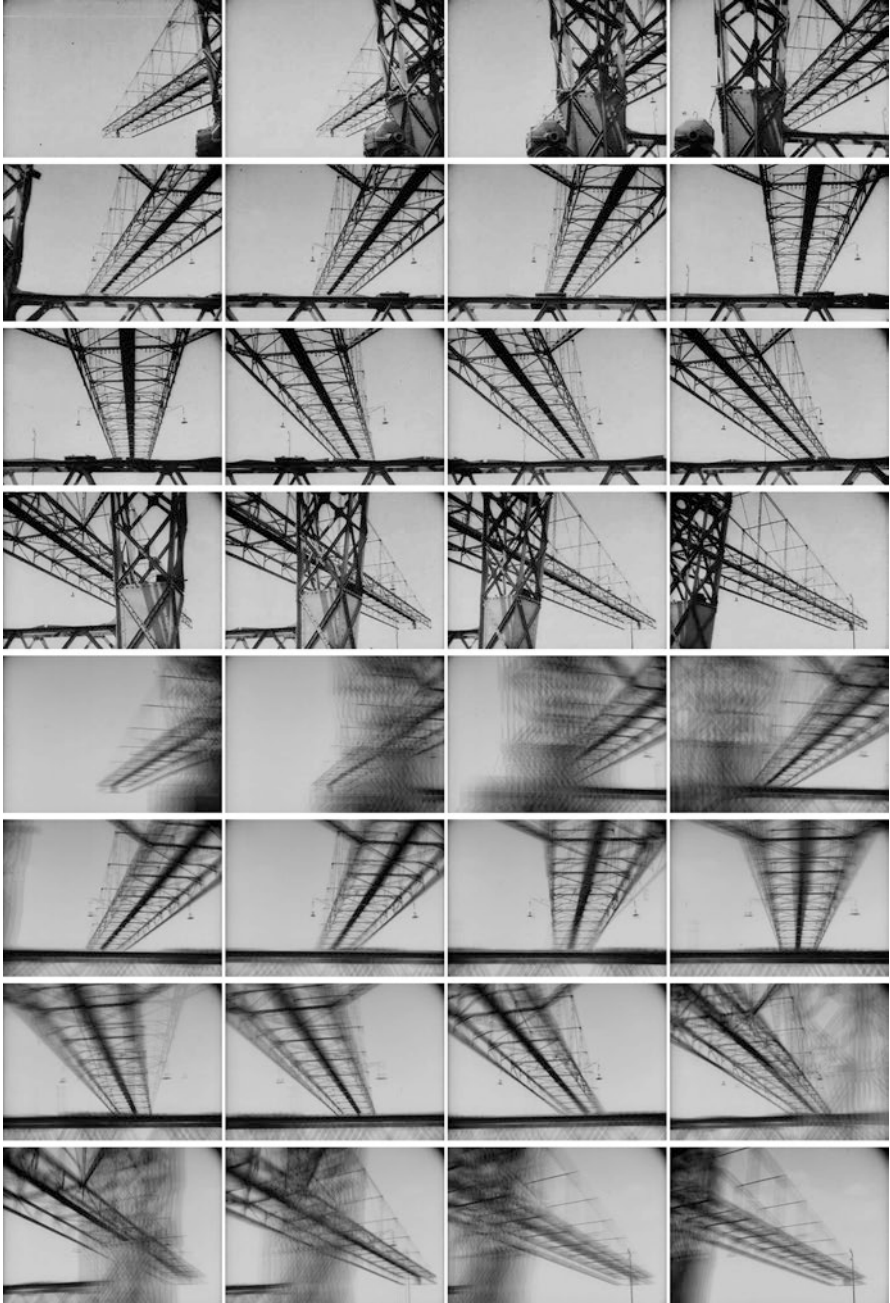
Fig. 7.12 Visualisation of animation software recognition of movement for *The Eleventh Year*. Frames from the film (above) and computer-aided motion recognition (below)

He was particularly preoccupied with animation; before the animation techniques in use today, he utilised the "stop-motion" technique in order to endow inanimate objects with movements that were as "natural" as possible: "In this respect, the idea of cinema as the art of moving things in space put forward by 24-year old Vertov in 1920 anticipated both the major technology of early 20th century cinema and aesthetics of many fantasy and action films made possible by these technologies. Imagine what Vertov would have done if he had access to these technologies in his time!" (Ibid.)

By contrast to the lengths of the shots, Vertov had little control over the movement within the frame and, above all, could not precisely plan it in advance. He was usually dependent on the material delivered to him by his cinematographers, although there is written evidence for his attempts to influence camera angles, shot sizes and filming speed. For Vertov, the basis of his film work remained the archival footage which he processed for his purposes, shortening or optically extending it. There are examples of identical shots, printed over and over, one after another in the film lab. This procedure was not unusual among Russian documentary filmmakers, as can be seen, for example, in *Vladimir Il'ič Lenin* (1949, Mikhail Romm): a speech of Lenin's only a few frames long is repeated three times. Vertov's fundamental difficulties in precisely designing particular patterns of movement at the editing table are manifested in the present-day visualisations, as Manovich states: "Examining the graphs, we also see that the proportion of the film that has systematically varying shot lengths is larger than the part that has movement patterns". (Ibid.)

The desire to have more control over the intensity and the direction of movement was surely not the only reason that Vertov's films (especially those from the 1920s) are edited so rapidly, but it is the most plausible. In practice, the filmmaker, with a well-aimed cut, could interrupt the movement of longer shots where he felt it was appropriate and then freely combine these movements with other shots. Conversely, however, the options were very limited, as a shorter shot offered little scope for the design of movement. As we know, Vertov favoured the shortest shots, with the greater control it afforded him over movement balanced by the decreasing sympathy felt by his editors. This negative attitude becomes easier to understand against the background of the work conditions in the film studios of the 1920s/1930s. The women in charge of editing did not have today's large monitors and digital navigational assistance at their disposal but had to search for the right shots laboriously with a rewind and then splice the pieces together manually. The decision to incorporate shots of Svilova at work in *Man with a Movie Camera* can thus be seen as Vertov's homage to his skilful and indefatigable colleague and to her entire profession. In interviews, Svilova enjoyed recalling her first encounter with Vertov in the editing room, as she was the only one to show compassion to the young director by splicing together his short film snippets (Svilova-Vertova, Vinogradova 1976: 66).

Fig. 7.13 Sequence from *Man with a Movie Camera* represented by all the individual frames of a shot

In his editing of brief shots, Vertov was very creative. An intermediate finale from the third reel of *Man with a Movie Camera* serves as a good example. In the following graph, a sequence is visualised using a representation of all the individual frames of a shot (Fig. 7.13).

The shot length can thus also be directly perceived, it being clear when the director has used only a single frame. The film progresses from upper left in rows from left to right, ending below at right. The black frames in the last row are only place markers in the graph and do not correspond to any frame in the film. If one concentrates, for example, on the eye motif in close-up, it becomes clear that a longer shot has been interrupted in the editing and combined with shots in which either the object is in motion or the camera moves. In the bottom third of the visualisation, especially, it can be seen how experimentally Vertov deployed and integrated the panning of the camera.

This short episode lasts only about 30 s. It follows a section in which we observe the fast and often chaotic-seeming traffic of the big city. Vertov builds the tension in such a way that our senses seem to be overwhelmed; in double exposures two trams nearly collide, and, by jumping, a woman just manages to avoid being run over. Incidentally, we can see a similar scene, assembled by Boris Barnet in inimitably entertaining style, in *The House on Trubnaya*, in which the young Vera Mareckaja saves her goose from a tram. The incidents in Vertov's film are directed at us directly

and frontally, they draw us into the events, and in a last escalation before the rapid editing, we are properly run over by a tram. The big city may not be underestimated; it is dangerous and – the way Vertov shows it on the screen – leads almost to help-lessness. The depiction of a traffic accident and the rescue work by the fire brigade and medical personnel which follows is then only logical.

In this way, very effective passages are created which simultaneously exploit the way the audience is affected by both the visceral impact of the rapid editing and the disorienting change of the camera's perspective. By means of Vertov breaking up the originally fluid motion with the insertion of short shots in extreme close-up, this becomes, on the one hand, more transparent and memorable, while on the other it is additionally accelerated. One could not improve on the way an important moment in the film is thus formally marked and charged in terms of content.

Busy Hands and Poetic Bodies: The Use of Slow Motion and Time-Lapse

It should once more be remembered that Vertov had to work, to a large extent, with "found" and, therefore, very heterogeneous material in order to create from it a homogeneous film. This is compounded by the fact that once the film had been shot, the director could have scarcely any influence on the above parameters, unless he resorted to very cumbersome and costly printing techniques. Before investigating in which films and at which points in them Vertov specifically slowed down or acceler-ated movements, it is worth discussing the terms slow motion and time-lapse from a technical and film aesthetic point of view.

Film, regarded in the literature both as a scientific instrument and as a visual attraction, can play its ability to alter the temporal dimension as a "trump card" (Brockmann 2014: 119). Till Brockmann refers to Tom Gunning's "the cinema of attractions", by now a canonical essay, to argue that the manipulation of time served, above all, the enhancement of exhibition value: "The attraction to be displayed may also be of a cinematic nature, such as the early close-ups just described, or trick films in which a cinematic manipulation (slow motion, reverse motion, substitution, multiple exposure) provides the film's novelty" (Gunning 1990: 57).

In this respect, the cinema experience in the period of early film was quite differ-ent from that of a modern spectator. As André Gaudreault writes, it was not only the film commentator, with his lecture, who contributed to the unique experience; the projectionist, too, often had a role with particular responsibility. Both functions could overlap and encompass others:

> It should not be forgotten that at that time the operator was solely responsible for the shows he edited (for the order in which films were shown, the music played in the auditorium, the final multi-media mix) [...] There was nothing to stop him from keeping up the flow of pat-ter as the lights went down and mutating effortlessly into a speaker-lecturer, a commentator, with the slightly different object of maintaining and supporting his audience's interest. (Gaudreault 1990: 277)

The projectionists thus functioned, as Brockmann puts it, as the real masters of ceremony, furthermore: "They could also, quite randomly (also at the public's request), without narrative or 'scientific' justification, show individual scenes or entire films either slowed down, speeded up or backwards" (Brockmann 2014: 121). Speeded-up projection was known to be particularly popular, in Russia, too, as Tsivian claims can be attested to by expressions that are still in use. These derive from the calls that would be directed at the projection booth from the audience: "Ne goni kartinu!" (Don't push the picture so much!) (Tsivian 1994: 55) We also learn that the projectionist was generally addressed as Miška, for example, "Miška, verti!" ("Miška, crank faster!")

The Picture that Runs Backwards

Reverse projection was resorted to for entertainment, including by the Lumiére brothers. Such evidence is also available for Russia; Tsivian quotes a St. Petersburg film review from 1898, which reports: "In order to amuse the audience they sometimes show some lively pictures in the right order, and then run them backwards, from the end to the beginning" (ibid.: 57). Alongside the dependable comic effect on the audience (such projection can transform any film into a comedy), such filmic procedures also reflect the interest of the time in cognitive experiments (ibid.).

In keeping with the general trend, Vertov repeatedly expressed his interest in the theory of relativity, though he remained, not surprisingly, rather vague about it. In the *Artistic Calling Card*, a depiction of his career in overview, he mentions it in the context of *Kino-Eye*, in which he had time move backwards, prompting the critic Bljum of the newspaper *Žizn' iskusstva* to state: "It somehow alters our usual imagination of movement and prepares the average viewer to understand the theory of relativity" (Vertov 2006 [1947]: 100). The precise relationship of the filmic process to Einstein's theory remains a mystery, and it may be assumed that neither Vertov nor the film critic had intensively engaged with it. Nonetheless, it is an impressive demonstration of the extent to which the physicist's theses were circulated and discussed – even in the entertainment section of a newspaper. The interest in the "negative of time" (Tsivian 1994: 58) as, among others, Vertov expressed it is also linked to the esoteric body of thought which, to all intents and purposes, found a place in communism. Just as in the cinema the dead could be reanimated, so philosophers and scientists, both renowned and obscure, sought such possibilities in real Soviet life.

Valerian Murav'ev, who for a while was active as the scientific secretary at the influential Central Institute of Labour, was particularly occupied with ideas about controlling time, which he set out in 1924 in the article "The Control of Time as a Basic Task of the Labour Organisation". In another publication he writes:

> A fixed prejudice is the conviction regarding the irreversibility of time. In fact, not only is time reversible in principle, but we are constantly carrying out such reversals when we undertake specific changes in our environment, thus awakening previous conditions according to our will. Every reasonable action is an example of this, as it can be repeated at will. (Hagemeister 2005: 49)

But the reawakening of previous conditions was intended much more radically and was explicitly planned; the death of millions, the immense losses, barely imaginable today, of the revolution and the civil war in the Soviet Union that followed it demanded a higher justification for the so-called victims of history (Groys 2005: 9). Instead of a Christian doctrine of salvation, the Russian biocosmists, including Nikolai Fedorov as one of the main representatives and most idiosyncratic philosophers, supplanted it to draft their own utopia in a spiritual vacuum. His programme, which was first widely disseminated after his death in 1903, is summarised as follows by Boris Groys: "The project of common action, briefly put, consists of the creation of the technological, social and political conditions under which it will be possible to enable, by technical, artificial means, the resurrection of all people who have ever lived" (Hagemeister 2005: 49).

According to Fedorov, art must be applied to the people themselves, and "all people who have ever lived must be resurrected as works of art and become museum pieces" (ibid.: 12). The display of Lenin is the personification of this body of thought, and there are also examples one could name from the science fiction of the 1970s; the creepy dead, resurrected by the power of the Zone in the 1971 story "Roadside Picnic" by Boris and Arkadij Strugacki or, more obviously, in Andrej Tarkovskij's *Solaris* (1972). It is not unlikely that Vertov was familiar with the biocosmists' writing; in any event he used art, as Murav'ev and Fedorov would have it, in order to control time. In the article "From 'Kinoglaz' to 'Radioglaz'", Vertov reports a moving episode which deals with the power of film in this context: shortly before her death, a girl was filmed by Vertov's cameramen for an edition of *Kinopravda* which is not more precisely named; her mother was at the screening and was so powerfully impressed that she lost consciousness (Vertov 1973b [1929]: 74).

Fig. 7.14 Sequences with reverse narrative from *Kino-Eye*: from meat to animal

Fig. 7.15 Sequences with reverse narrative from *Kino-Eye*: the production of bread

Fig. 7.16 Sequences with reverse motion from *Kino-Eye*: high-diving

In four shots, Vertov even combines slow motion with reverse motion. The shots running backwards are also the dominant stylistic resource of *Kino-Eye*, used in a total of 53 shots, spread over four episodes. After a woman has bought meat at the market, she becomes aware of the cooperative via a poster on a wall. As, in the Communist sense, this would have been the right place to buy the meat, the action comes to a halt at this point and is reversed (Fig. 7.14). The woman walks backwards, the meat is brought back to the butcher and the bull comes back to life and even travels back to the meadow by train. The production of bread, similarly, is also shown in reverse sequence (Fig. 7.15).

Time is, in a manner of speaking, turned back and a wrong action is put right. Vertov is fully conscious of the increase in attention occasioned by this procedure, which even today can induce surprise and mirth in a contemporary cinema audience. The educational message is thus transmitted playfully and almost incidentally. A further aspect that ought to be considered here is Vertov's attempt to demonstrate reverse action as a procedure of the *kinoglaz* method and perhaps even thus propagate it. Two additional shots of diving into water in reverse mode, shot in slow motion, too, confirm this intention on the part of the director, it even being emphasised by titles such as "Kino-eye Shows How to Dive Properly" (Fig. 7.16).

Time-Lapse

The category of filming speed is generally a difficult subject, as it is so decisively bound up with the respective work conditions of the cinematographers. In Vertov's day, the cameras were not yet motorised and were equipped only with a hand crank; the cameraman having to crank manually meant that operators of varying skill had correspondingly varying success in overcoming the fluctuations in shooting speed that were inherent in the system (Monaco 2004: 119).[1] Not infrequently, an important event was covered by several cameramen – now and then they would become part of the image themselves; in *Stride, Soviet!*, for example, one of the cameramen can be seen at work as Lenin is lying in state. An important point was also the choice of film stock, which not until the 1970s was manufactured with a satisfactory sensitivity to light, meaning that during shooting it was necessary to make precise adjustment according to the light conditions. Under certain conditions the cameraman had to crank more slowly, in order to ensure sufficient exposure for the film. The time-lapse effect that could result was thus not always necessarily intended, but it was very difficult to control, and not even experienced cameramen could completely prevent it, especially, of course, when they were working with film-makers as experimentally minded as Vertov and Kaufman, who liked filming in locations that – for the time – were unusual. An example of the unintentional time-lapse effect due to poor lighting conditions is the shots in *The Eleventh Year* showing the interior of the coal mine. A time-lapse effect in film was, thus, in principle more difficult to control than slow motion, and it need not always be the result of a conscious use as a stylistic device.

   Vertov used both slow motion and time-lapse consciously and unconsciously. In *Kino-Eye* Vertov was still experimenting extensively with the manipulation of time and shot nine shots in slow motion, as well as eight shots in time-lapse. In *Stride, Soviet!* Vertov made only sparse use of time manipulation procedures; the effect makes only two appearances: at one point he shows the bustle of traffic in time-lapse, supported by the title "Where are you rushing to?" and once more with reverse motion. The following films, *Sixth Part of the World* and *The Eleventh Year*,

Fig. 7.17 *Man with a Movie Camera*: distribution of time manipulation
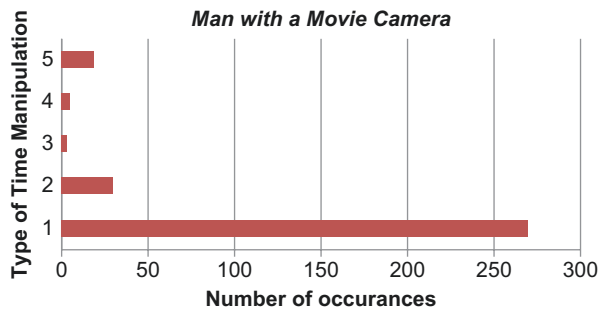
[1] For a detailed investigation of the development of film stock over the course of film production, cf. the appropriate sections in Salt 1992

also yield little on this aspect; in the former film, three time-lapses may be found and in *The Eleventh Year* only one time-lapse and one shot in reverse motion.

Only in his next and most experimental film, *Man with a Movie Camera*, did Vertov again really indulge in playing with filmic time. Four slow motion shots are even run in reverse: doves fly back to a roof and chess pieces arrange themselves on the board as if by magic after having been pushed together. The process of manipulating time is given its most thought-out and creative use here and will therefore be presented in a separate overview (Fig. 7.17). There are a total of 270 time-lapse shots, approximately equivalent to 5 min of screen time overall.

No.	Time manipulation	Number
1	Fast motion	270
2	Slow motion	30
3	Reverse fast motion	3
4	Reverse fast motion	5
5	Freeze-frames	19

The time-lapse photography is largely organised in two large blocks, with 17 shots spread throughout the film in small units of about three shots each. These include shots of rushing trams and cars at full speed being regulated by rapid traffic signals. At significant points Vertov envisioned acceleration and, not very surprisingly, chose traffic for it.

Time-lapse almost always produces a comic effect, suggesting humorous experiments. One shot, for example, shows how a film reel is wound, with an additional trick (reverse motion) giving the impression the film could simply jump onto a film core. This scene is a joke obviously aimed at film professionals, as a normal viewer would understand too little of film work to realise that such a move as is shown in reverse is not possible.

It is, of course, not just the quantity of shots with time manipulation that is decisive. What it does show is that Vertov, apart from individual shots over which he may not have had control, preferred to construct time-lapse photography as discrete episodes. It is plausible for a director to think like this; in this way not only is the formal design made blatantly obvious to the audience, but the episode's content can also be additionally emphasised through the manipulation of time. An affective impact also results from such a surprise effect, as the spectators are almost physically involved and formally accompany the happenings on the screen.

One of the two large concentrations of time-lapse photography is located in the middle of the film. We observe the ever faster packaging of cigarettes by a young female worker, with this action being edited in parallel with another young woman working in a telephone exchange. A total of 66 time-lapse shots appear in this episode, which lasts about 10 min; in the present work, these are visualised in two ways: in Fig. 7.18 the relevant point in the film is shown as a montage of the first frame of each shot.

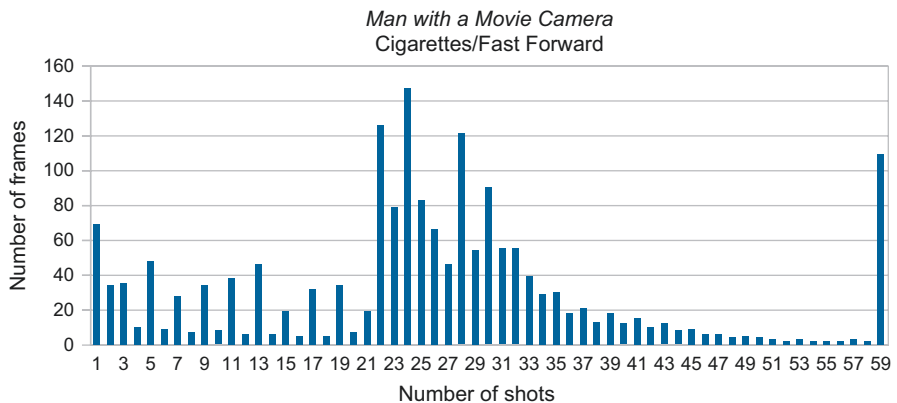**Fig. 7.18** *Man with a Movie Camera*: the "cigarettes" episode (time-lapse)

Fig. 7.19 *Man with a Movie Camera*: the "cigarettes"episode (time-lapse)

However, in order also to obtain an impression of the correlation of the shot lengths with the filming speed, in Fig. 7.19, the same episode is depicted in a separate graph. In principle the majority of the shots are very short (less than 50 frames), and it may also be observed that Vertov additionally marks the time-lapse photography in the editing – by means of an alternation of very short and short shots, as well as an intermediate finale, during which the shots continually decrease in length.

The second large block in the film, with 188 shots, is about 3 min long and formally summarises the whole film, both visually and in terms of content, in a constantly accelerating finale. The episode I have accordingly titled finale is visualised
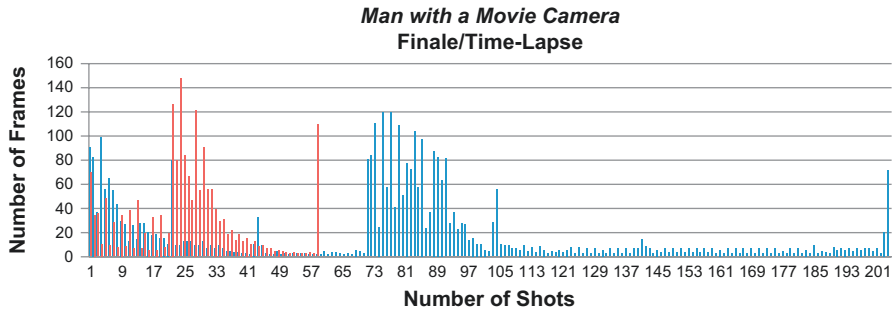
Fig. 7.20 *Man with a Movie Camera*: the finale (time-lapse)

only as a depiction of shot lengths in Fig. 7.20, as the montage of the first frames of each shot would, in this context, be insufficiently informative. Here, too, the earlier observation is confirmed: Vertov's time-lapse shots seldom appear in isolation; rather, they are usually grouped together and then additionally strengthened through the editing of extremely short shots.

Slow Motion

Filmic procedures such as slow motion and time-lapse are as old as the cinema itself (Brockmann 2014: 118). In *Die Zeitlupe. Anatomie eines filmischen Stilmittels* (Slow Motion: Anatomy of a film stylistic device), Till Brockmann attempts to approach this complex subject in a comprehensive manner, starting with the technical prerequisites for the implementation of slow motion, through film history and film theory, to its various narrative and aesthetic functions. He says at the outset that the infinite abundance of the slow motion technique's applications permits only general considerations and findings, which may then, on the basis of samples, be empirically supported and explained.

In so doing, he touches on a general problem for the formal investigation of films – a sampling remains, by its very nature, always small. Brockmann regrets that he is unable to deliver a comprehensive study with statistical evaluations for a large quantity of slow motion photography. He does, however, find it meaningful to investigate the combination of slow motion with other procedures, such as variations in shot size, as all his examples use close-ups and detailed views which direct attention to the object filmed (ibid.: 225). This could certainly be an exciting field of application for computer-aided analysis, not only for the isolation of slow motion but also in the context of genre recognition.

Brockmann nonetheless arrives at plausible findings about the functions of slow motion with his method. Before breaking down, and using examples to discuss, the individual functions, he first of all makes the general determination that slow motion is deployed to direct attention, a result of the contrast of speeds in the image

(ibid.: 172). Vertov perhaps also demonstrates the argument in Brockmann's explanations, according to which most functions of slow motion are based not on a theoretical consideration but spring from selective experimentation and practice (ibid.: 336). The same may be assumed for other procedures of time manipulation. Karen Pearlman, from the vantage point of an editor, also comes to a similar view: "The major function of slow motion is to prolong for the purpose of heightening whatever effect the gesture or action covered is meant to have" (Pearlman 2013: 201). The action can, for example, become more poetic, romantic, glorious or frightening, or the emotion or importance of the moment can be strengthened in other ways (ibid.). Slow motion is thus predominantly to be found at "the heart of the narrative", whence it creates narratively relevant moments, turning points and climaxes (Brockmann 2014: 337): "Slow motion functions on all levels; it affects the design of spatial and temporal contexts, it supports and influences causal linkages, it emphasises the significance of individual moments, sets highlights in the narrative flow, deepens the understanding of characters and situations" (ibid.: 222).

For the purposes of analysis, therefore, it is worth beginning with questions of narrative motivation, even though slow motion must by no means necessarily serve the narrative. According to Brockmann (ibid.), slow motion appears more concentrated at these important moments in the narrative flow and is almost always multifunctional, which is nothing unusual in a film, most design elements of which possess several functions. Slow motion fundamentally requires of the audience to immerse itself connotatively in the image, to question its relationship to the whole and, through the visual design, to reflect. In other words, "Slow motion delivers a longer, and thus denser, more complex, quantitatively and/or qualitatively richer version of an event than would be attainable at normal speed" (ibid.: 237).

But it is not only the information content that is higher in slow motion; the human body, through the apparent weightlessness, gains in harmony and lightness – in beauty. This, incidentally, is closely linked to the use of sound; such shots are almost always silent or accompanied by music, an echo effect sometimes being used. One reason for this is that the diegetic sound is too deep when thus stretched out, creating a comic effect. Another is that slow motion's function – for example, the aesthetic enhancement of a movement – can additionally be emphasised on the soundtrack level.

Slow motion as a stylistic device is clearly directed at the emotions of an audience. This happens firstly through the aesthetisation of the action, often taking place in intimate symbiosis with the intensification and dramatisation on a narrative level (ibid.: 255). At the same time, we involuntarily ascribe a greater significance to slow motion events because of their extended duration, as we are more attentive and ultimately more involved emotionally. For emotion arises through the conscious or unconscious evaluation of an event as relevant to an important matter, produced by the film's narrative (ibid.: 321).[2] Narrative functions like intensification and dramatisation thus almost always also signify the spectator's emotional involvement,

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[2] Brockmann here refers to the emotion theory of Nico Frijda, in particular the book *The Emotions*. Cambridge: Cambridge University Press 1986.
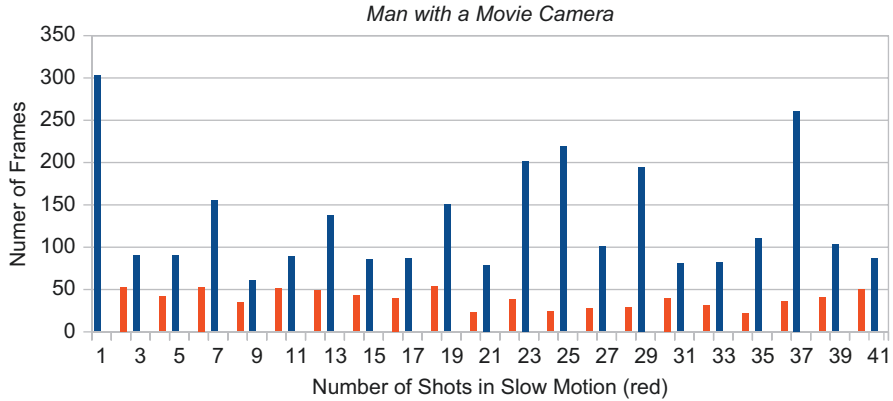
Fig. 7.21 *Man with a Movie Camera*: sport sequence with slow motion shots (red)

that is, sharing the feelings of the drama's hero or trembling over the life of the heroine in an action film. But not only rational factors, like an evaluation of the relevance of the action, are responsible for this emotional involvement on the part of viewers. Our bodies are directly influenced by the energy or quality of a movement on the screen. Pearlman says that slow motion has an effect on our kinaesthetic empathy, through the often visible effort of the protagonists. "Bodies (and these could be human bodies, bodies of water, bodies of objects) expend greater energy to do an action when they appear not just to push against obstacles on their journeys but also to be pushing the resistance of time" (Pearlman 2013: 201).

This resistance of time, which can sometimes be perceived as a tangible cushion of air, has an effect in two directions; on the one hand, it can carry the human body and make it seem to be weightless, while on the other hand, it can hinder it and make it seem cumbersome (Pearlman 2013)[3] – in the first case, the action is more poetic and aesthetic, while in the second, it is dramatised. In using slow motion in *Man with a Movie Camera*, Vertov chooses the poetic function, which seems in tune with his film theory; if he rejects the feature film, he cannot then approve of dramatising procedures. As already mentioned, despite the explicitly adventurous experiments of the *kinoki*, until *Man with a Movie Camera*, slow motion was not often used. In this film, too, it is seldom used, and the analysis shows, when it does appear, it is usually grouped in blocks. Of the total of 35 shots for which the action has been slowed down, 21 are grouped in a single long sequence, in which enthusiastic young athletes are observed and documented while engaged in various forms of physical training. The depiction of the shot lengths clearly shows the editing pattern; the slow motion shots are cut in for longer than the alternating shorter shots of spectators (Figs. 7.21 and 7.22). The way this sequence is introduced is also of interest; a wall newspaper informs us of the sporting activities of today's youth: "Sport is a good thing. Our youth doesn't quarrel here".

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[3] Her expression is "cushion of air".

Fig. 7.22 *Man with a Movie Camera*: sport sequence with slow motion shots

It is precisely in these shots that the poetic character of slow motion is staged; the well-trained athletes float formally through the air, seeming to overcome gravity without effort. Brockmann goes so far as to compare the film with Leni Riefenstahl's Olympic films:

> The footage provides an analysis of both the complex sequences of movement and the skills of the athletes, as they become an aesthetic experience. *Man with a Movie Camera* can in this respect be seen as a precursor of the two-part film shot by Leni Riefenstahl on the occasion of the 1936 Summer Olympics in Berlin, OLYMPIA – FESTIVAL OF THE NATIONS and OLYMPIA – FESTIVAL OF BEAUTY (both 1938), which is considered a pioneering aesthetisisation of sporting achievement. (Brockmann 2014: 133)

Although this comparison is probably deliberately overstated in its formulation, it is still baseless. For even though Vertov doubtless derived a certain aesthetic pleasure from the athletes and consummately focused on their bodies, it is not their aesthetisisation that is in the foreground. We can assume that the athletes were not professionals, but amateurs exercising in their free time. That also matches the film's chronology, in which the Soviet workers devote themselves to many types of physical training after their work hours. In the course of this, many ambitious achievements may be admired, and the sporting aspirations are in evidence, but there is nothing indicating a contest for medals. Quite the contrary, instead of competing, all athletes participate in a big, friendly, sportive round dance. Apart from that, we could understand the individual spectators singled out by Vertov for close-ups, who seem to be observing the action from a nearby vantage point, as the communicative counterparts of the high jumpers, pole vaulters, hammer throwers and hurdlers. It is only in successful communication, in which the ideal performance of an exercise is followed by a positive reaction, that knowledge is transmitted and admiration for the Communist youth is generated. Alongside the sports for individuals, people engaging in group sporting activities are shown just as extensively, in accordance with the concept of the Communist ideal, in which the community and common experience take priority over the individual and his needs.

Vertov and Riefenstahl, in any case, differ in their attitude to higher art. While the controversial director, without the slightest irony or humour, places the human body in its ideal form at the centre, Vertov does precisely the opposite. If the (Communist) bodies are pleasant to look at, it is above all because of their freshness and youthful
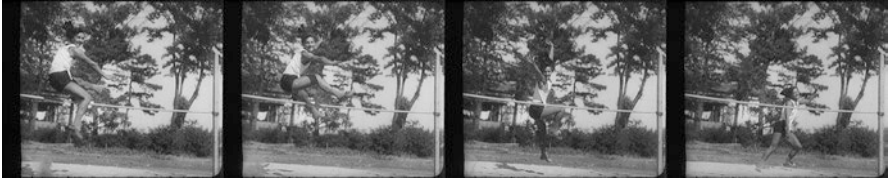
Fig. 7.23 *Man with a Movie Camera*: Athlete in slow motion

Fig. 7.24 *Man with a Movie Camera*: Sport-loving spectators

unaffectedness. The cheerful high jumper can serve as an example. Vertov uses slow motion here for several reasons: one is to demonstrate the discipline for the audience, and another is to have the (almost equal) joy of documenting it. Both are best served by the slowing down of time – only thus do we perceive the smile of the athlete, despite her concentration and effort (Fig. 7.23).

The attentive and amused spectators can, beyond that, serve as a guide to the direction in which Vertov is leading us and how he imagines our ideal reaction (Fig. 7.24).

The public can admire the advanced practitioners of the individual disciplines in the studies of their bodies and perhaps even learn something from them. These shots are the positive counterpart to the passive, middle-class athletes who appear later in the film, training without visible success on artificial horses and rowing machines to risible effect.

A second block about 8 min later in the film again combines seven slow motion shots in one section. Vertov's cameramen here show themselves off as talented sports reporters, capable even of enthusing a present-day audience; competitive sports between two sides, such as football or basketball, are shot from unusual angles and from very close quarters. This enables the camera to capture the enthusiasm and fighting spirit of the young players directly. Slow motion is reserved for special moments, just as it is nowadays with television coverage; we see the ball flying through the air or the goalkeeper in a spectacular saving move. Vertov edits these events successively faster till we again find ourselves on the motorcycle circuit, where Kaufman was rapidly filming the circling.

Do the examples validate the more general statements about the use of slow motion in Vertov's films? Familiarity with Vertov's writings certainly permits one to assume that the director would object to an interpretation of it as pure attraction. For Vertov, slow motion was, to begin with, the quintessential cinematographic means of dissecting life. His first attempts with it went back to the earliest period of his

film activity, to be more precise, 1918, when Vertov's famous jump from the so-called grotto at number 7 Maly Gnezdnikovsky Street took place. At the time, the director had given the cameraman the task of photographing his jump "in such a way that my entire fall, my facial expression, all my thoughts, etc. would be seen" (Vertov 1984e [1934]: 123). Already while working on *Kinonedelja*, Vertov wanted to liberate himself from the customary conventions of filming:

> I separate myself from the usual 16 frames per second. Alongside the conventional methods of film photography, slow motion photography must be deployed – animation, single image photography, microphotography, macrophotography, photography in reverse, photography with a moving camera etc. *Kino-Eye* sees itself as "that which the eye does not see," as a microscope and telescope of time. (Vertov 2008h [n.d.]: 266)

Vertov repeatedly indicated in his writings and lectures that human perception cannot be an objective process. Four people sitting together at a table will nonetheless each experience the world completely differently, according to their specific characteristics, but also according to their physiques or their eyesight. The camera is therefore superior to the human; it can lend him eyes that give an objectively correct impression of the world, one which additionally continues to be developed (Vertov 2008f [ca. 1929]: 148). For Vertov, the perception of events is inextricably bound up with the speed at which they take place. Everything that plays out too quickly for the human eye to be able to assimilate (which holds for most processes) can thus not be seen at all.

> Where the speed is very great – it is only so for the human eye, for that time in which we are accustomed to live [...] We analyse the street and that which we do not usually notice, we see in the photography. Do you then see a pattern in the movements of the pedestrians, when you see with the human eye? No, you do not see that, it is only visible for the camera eye. It is, in fact, the reality, but we do not see – only the film camera sees it. (Ibid.: 149)

Fig. 7.25 *Three Songs of Lenin*: the "silence" episode

The sporting footage in *Kino-Eye* and *Man with a Movie Camera* can be understood from this point of view, perhaps best seen through the example of the high jumper. Only in slow motion can the different emotions in the protagonist's face be recognised and even felt.

As already mentioned, Vertov uses slow motion for a variety of reasons, including to mark special political events, as, for example, in *Three Songs of Lenin*. Following longer shots of Lenin's body in the coffin, we witness the funeral rites. The terrible fact now forces itself into the consciousness of the Soviet population, here seen mainly as close-ups of mourning women. Vertov chose to stage this sorrow as a complete standstill of life in the Soviet Union. To achieve this, the frames in 22 shots were either duplicated (as freeze-frames) or the image so composed as to be quite without movement and thus to evoke the impression of everything having come to a halt (Fig. 7.25).

In a second graph, the same episode, which I have called "silence", is illustrated in its entirety, in order to reveal the shot lengths, as well. As the bars underneath the frames show (Fig. 7.26), the shot lengths keep decreasing and then remain consistently short till the end of the episode. A pattern can thus be observed, which Vertov had also implemented in his earlier films.

Brockmann also explains in his book that the filmic avant-garde (e.g. Germaine Dulac or Jean Epstein) often used slow motion in order "poetically to evoke moods and emotions, or to visualise the mental states of the characters" (Brockmann 2014: 129). One could say that right here Vertov uses slow motion in this sense, even though the shots themselves were not planned as slow motion. The rhythm of this sequence slows down the whole film from this point on; as a spectator one instinctively goes along with the passage of images, moving one's head forward and then back again, which in turn matches the typical movement of mourning.

On the informational level, we receive the message; the sorrowing people in the Soviet Union have formally been turned to stone and have temporarily lost their orientation, which is shown on the screen not just metaphorically but quite concretely. Emotion is here generated by the slow editing rhythm, the motionless people and objects in the image and, of course, by the semantic content of the images, for the absorption of which we are given ample time. Vertov skilfully combines several stylistic devices, one of which, naturally, is the sudden introduction of silence.

This alternation between standstill and movement is already used by Vertov at an earlier point in the film, when in the intertitles about Lenin he introduces the contrast between the living, energetic leader ("he moves") and the motionless corpse in the coffin ("he does not move"). Only Lenin's ideas and thoughts can make the Soviet Union continue to blossom, establish cities and give joy to people. Vertov called *Three Songs of Lenin* a "symphony of thoughts", an inner monologue, which tells of

Fig. 7.26 *Three Songs of Lenin*: the "silence" episode, the first frame of each shot with bars under the images indicating shot length

the way from the old to the new, from the past to the future, in short, of the road to unenslaved, revolutionary people (Vertov 2008g [1934]: 265). The episode "silence" thus marks a pause for contemplation, a momentary stop and new orientation – formally solved convincingly by Vertov. This episode is worth remarking on for another reason: individual striking moments such as these are evidence that the director was still experimenting with the form as late as 1934.

"The Little Life": Faces of Communism

Interestingly enough, for Béla Balázs, a contemporary of Vertov's and a concise observer of cinema's development, the ability of film to play with the perception of time is at most a marginal issue. At any rate, he says nothing about it in his enumeration of the means by which film was becoming a special language – close-up, shot and editing: "These are the basic elements of the optical language which we now wish to analyse individually" (Balázs 2001b [1930]: 14). The involvement of the audience – by significant contrast to theatre – takes place in his view, for example, by means of the close-up, which he calls "the little life" (Balázs 2001a [1924]: 49). In Balázs' typically lyrical language, the close-up becomes the "observation of the heart", which radiates warmth and is moving without seeming sentimental. Like slow motion, it serves to accentuate; it is a "mute indication of the important and the significant, by which the life depicted is simultaneously interpreted" (ibid.: 50). For Balázs, a director's use of the close-up even expressed (his) philosophy of life.

Human faces in close-up are a particularly effective technique. For Balázs, the faces can be read and deciphered (Barck, Beilenhoff 2004: 6); furthermore, the facial expressions of the actors depict the original tempo of the feelings expressed and thus transmit to us the rhythm of the inner emotions (Balázs 2001a [1924]: 46). The possibility of every mental transformation must be visible in the face, as must the ambiguity of a character and the potential simultaneity of good and evil: "We are moved by the deeper gaze of some faces as by the openings for eyes in a mask" (ibid.: 47). It is precisely here that his fascination for film lies, in its ability to let us observe faces more closely, in greater detail and more intensively.

The film scholar Anton Kaes points out that the close-up always belonged to the cinema's repertoire. If at first it was used as an element that served to satisfy curiosity, its effect after the First World War was transformed: seen in historical context, the separation of the head from the body could result in a shock. "That a part could be violently ripped from its context – this principle of close-up attained greater significance due to the war and already appears around 1919/1920 as a shock effect in a horror film" (Kaes 2000: 159).

Though Kaes convincingly demonstrates these propositions using the example of *The Cabinet of Dr. Caligari* (1920, Robert Wiene), that does not necessarily mean that they are applicable to the Soviet Union. Vertov, at least, assesses the dismantling of the body and its filmic reassembly very positively. In a famous quote, he speaks not only of wanting to create a new Adam but thousands of people who had

been planned before: "From one person I take the hands, the strongest and most dexterous; from another I take the legs, the swiftest and most shapely; from a third, the most beautiful and expressive head - and through montage I create a new, perfect man" (Vertov 1984b [1923]: 17).

A good starting point for the subject of facial close-ups in Vertovs' films in this sense is again his jump from the grotto. With the help of camera technique, the film-maker's face was to permit his thoughts to be read, so that the spectators, too, would understand what the person being filmed was thinking. This documentation of an "authentic" event, experienced by a real person with unfeigned emotions, was, for Vertov, that truth which he wished to show in his films in various ways. Through the use of technical artifice (slow motion and close-up) and the creation of a special situation, Vertov wanted to show people without masks; to film life uncontrived. Sometimes he would use the faces of people for this, presenting them in close-up and assigning them particular functions in his montage episodes.

Balázs worked out a further specific about other close-ups. Whereas, for example, a hand shown in close-up loses its meaning if its surroundings are not taken into consideration, the situation is intrinsically different for a face: "Confronted by a face, we no longer find ourselves within a space at all" (Balázs 2001b [1930]: 16). He goes on to write: "A new dimension opens before our eyes: *physiognomy*. The position of the eyes in the top half of the face, the mouth below; wrinkles now to the right, now to the left – none of this now retains its spatial significance. For what we see is merely a *single* expression. We see emotions and thoughts. We see something that does not exist in space" (ibid.). Vertov, then, must recreate this space, by alternately editing in faces and long shots of the landscape or the surroundings. To show the human countenance completely without a frame of reference could signal a purely aesthetic pleasure and/or the intention of indicating a foregrounded emotional involvement. In the special edition of the journal *montage/*av., Joanna Barck and Wolfgang Beilenhoff write in their article "Das Gesicht in Film/Filmologie und Psychoanalyse" ("The Face in Film/Filmology and Psychoanalysis") that Alfred Hitchcock's statement "the position of the face determines the shot composition" should be reversed. If one wants to learn more about the face in film, this proposition should state: "The shot determines the face" (Barck, Beilenhoff 2004: 11). If this means that the choice of shot size determines the meaning of the face, then it certainly applies to Vertov. In this case, one could even understand the filmic shot as a political-ideological shot and still be on the right track. Vertov chooses the protagonists for such facial points and consciously focuses on their physical characteristics.

In the manifesto "Kinoks: A Revolution", which Vertov wrote shortly before the beginning of his career in 1923, the young film-maker used powerful phrases in declaring himself a revolutionary of sight. He challenged his colleagues: "Look around you – there! It's obvious to me as to any child. The innards, the gut of strong sensations are tumbling out of cinema's belly, ripped open on the reef of revolution" (Vertov 1984b [1923]: 11). Above all, Vertov wanted to guide the audience's gaze with clever and conscientious use of camera and editing.

> I make the viewer see in the manner best suited to my presentation of this and that visual phenomenon. The eye submits to the will of the camera and is directed by it to those successive points of the action that, most succinctly and vividly, bring the film phrase to the height or depth of resolution [...] A system of successive movements requires the filming of dancers or boxers in the order of their actions, one after another [...] by forceful transfer of the viewer's eye to the successive details that must be seen. (Ibid.: 16)

In his films, Vertov preferred to show "real" people in dialogue with one another and reacting to one another in close-up. By taking faces which sprang from the daily lives of his audiences, the film-maker believed he was simultaneously heightening their attentiveness. Although the average cinema patron surely preferred film stars, Vertov's concept is not so far-fetched. In the early cinema, the fascination with the medium was the possibility of seeing oneself on the screen – the itinerant cameramen of the English fairgrounds come to mind (e.g. the films of the British Mitchell and Kenyon Collection). But in Russia, too, the Lumiére cameramen were out and about, in order to be able to show the strollers on the Moscow streets their own likenesses on the screen for an entrance fee in the evening (Leyda 1983: 21). Walter Benjamin, as a concise observer of his time, considered the newsreel to be the medium which offered passers-by the rare opportunity to participate as film extras. It sounds obvious, if we view Vertov's films as part of this tradition, even if he did not do this in the openly denunciatory fashion of Aleksandr Medvedkin with his *Film Train*. Alongside *Misère au Borinage* (1933, Joris Ivens and Henri Storck), Benjamin names *Three Songs of Lenin* as a prime example of this (Benjamin 1977 [1936]: 29). And even Vertov had his stars with recognition value, Lenin or "the man with the movie camera", who are introduced and depicted as protagonists.

Both in the idealised depiction of individual aspects of Soviet life and in the gestures and facial expressions of the people in the film, Vertov transmitted ideological messages in keeping with the Party line. In which ways and with which techniques this was done requires a precise analysis of image content and the principles of episode construction to decipher. Vertov not only considered an abundance of "kinorazvedčiki" ("film observers") with an arsenal of film equipment a necessity, he also envisioned a special unit of character types for his films. He referred to it as the "attempt to create a gallery of emotionally expressive portraits for the realm of non-theatrical film" (Vertov 2006 [1947]: 98). Perhaps Vertov was also thinking strategically when he wrote this text in 1947. If the director was trying to justify his works in a chronological overview, it was apparently wiser, under the prevailing political conditions, to confess his attitudes to dramaturgy and actors. Vertov mentions some of these types – the kopučuška (the little girl nicknamed black curly hair), the cyganenok (little gypsy) and the Latyš (Latvian) who appear in *Kino-Eye* – emphasising how important these portraits were to him and that he had begun this as early as *Kinopravda No. 1*. An entire film was even to have been devoted to this subject, as he describes, referring to himself in the third person:

> The gallery is broadened in later works by Dziga Vertov, especially via the portraits of convicts working on the construction of the White Sea canals, the women workers and the Kolchos chairmen from the film Tri pesni o Lenine, the woman parachutist from Kolybel'naja, the portraits of women pilots from the film Tri geroini, Saule from Tebe, front! And many others. Vertov's repeated proposal to direct his own film Portrait Gallery was never approved; one had to make way for urgent films involving current events. (Ibid.)

As is well known, during his lifetime Vertov spoke out vehemently against the use of actors, which for him was a significant element of the film art to which he was hostile. (Vertov 2008c [1925a]: 63) Although he did not develop any elaborated concept for the guidance of his protagonists, he nonetheless followed certain basics; he thus, for example, preferred amateurs, who were sought out according to their class origins. One of his criteria in choosing his participants was a particular credibility in their activities, their profession and their origins. It was, in other words, about real people whose authenticity could gain sympathy or have an off-putting effect, like the drunken worker or the praying women in *Enthusiasm*.

By analysing the use of faces in close-up in the cases of *Kino-Eye* and *The Eleventh Year*, it becomes clear with what variety Vertov used them. *Kino-Eye* was his first feature-length film, and he was not quite happy with it, though its length was only one of many flaws for which he was critical of it (Vertov 1973a [1925]: 50). The ideas of the *kinoglaz* concept were here being systematically implemented for the first time, after all. In 1924 Vertov was still experimenting with the formal realisation of the editing units, which he called episodes. In his later films, the director's work method would become, in a formal sense, stricter and the functions were expressed even more clearly, as is the case with *The Eleventh Year*.

In my determination of the shot sizes for the respective film, I paid particular attention to whether an extreme close-up or a close-up was used. Naturally, shot sizes do not follow any absolute scale of magnitude; that must be determined in the context of the respective film. Therefore, for the work presented here, such determinations were made less according to a standard than according to position and function in the respective context. As the close-ups, in the vast majority of cases, appear within blocks, the selection was relatively simple to make. It is also significant whether and how the shot size changes over the course of a shot, for example, from a medium shot to a close-up or from a close-up to an extreme close-up. Examples of questions that could usefully be asked include: Have the faces been filmed from a striking angle and, if so, is one perspective favoured over others? Have the faces been subjected to camerawork that is rich in contrast, i.e. are there strong values of light and dark in the image or is the contrast unremarkable? How has the image composition been designed, is the shot overwhelmingly static or dynamic in its construction and what could lie behind the decisions for the choice of either procedure? Are several people to be seen in the image, and, if so, why precisely have these faces been selected to show in combination? Semantic observations can also contribute to understanding the functions of close-ups. Note should be taken of faces that recur, whether they are male or female and whether perhaps someone of prominence is among them, which could be important in explaining the message of the relevant episode (or film).

Fig. 7.27 *Kino-Eye*: faces in extreme close-up

Kino-Eye: Observers and Observed

In *Kino-Eye* Vertov did not yet group the close-ups of faces together within episodes, as he did in later films. An analysis of all relevant shots in the film enables one to conclude that in this early film he was still using close-ups in a more conventional way, for example, for participants in a discussion or selected individuals from a group of spectators. By contrast to *The Eleventh Year*, in which there are no extreme close-ups, in *Kino-Eye*, Vertov uses six shots in which individual sensory organs, such as the mouth and the eyes, fill the entire screen (Fig. 7.27).

Only a small proportion of his films feature extreme close-ups. The act of brushing the teeth, though a favourite motif of Vertov's, which he uses in both *Man with a Movie Camera* and *Kino-Eye*, is in *Kino-Eye* invested with a direct educational message, linked in content to other "communications" of the film; pioneers wash themselves, and we learn the right way to dive into the water and are frightened away from indulgence in alcohol. That the brushing of teeth, of all things, should be magnified to such a degree could be simply because the public had to be brought close enough to the action in order to recognise what was happening. Perhaps the procedure was also illustrated in that way simply because that is how it really takes place – in front of a mirror in which one sees one's face in close-up. One could argue that in *Man with a Movie Camera* both the act of brushing the teeth and the eye in extreme close-up are no longer primarily for the education of the people but are there more as a playful reference to educational intentions (Wurm 2010). In *Kino-Eye*, however, each of these educational messages is formally designed and does not consist of close-ups throughout.

Such microphysiognomies, according to Balázs, can also be interpreted as disclosures of the unconscious. While the complete shots of the players' faces showing expressions were still under control, the partial physiognomies, for example, the forehead or the eyes, betray more about people than they would wish. The hidden, deeper face that can be revealed by the close-up here forces its way to the surface: "In directing its aim in close up at those minute surfaces of the face that we ourselves do not control, the camera can photograph the unconscious. From close-to, the face becomes a document as writing does to the graphologist" (Balázs 2001b [1930]: 19).

Fig. 7.28 *Kino-Eye*: the observers and the observed

Even if graphology has, in the meantime, lost its status as a science, it is still not too far-fetched to assume that Vertov employed the technical process of the extreme close-up in order to reveal more than could be seen on the surface. The camera thus crawls formally into the face in the examples given in Fig. 7.39, reporting in micro-photographic style on the processes taking place there. The directions given to the actors in the early 1930s, which Balázs quotes – one should remain as one is, without acting, the close-up camera will capture the essentials itself – fits in well with Vertov's film theory. The face in close-up stands for itself, and it requires no acting technique to strengthen it. The fact that one case deals with film art and the other with documentary depiction is apparently immaterial. Balázs apparently applies the same standards to the feature film as to the documentary film; furthermore, the close-up can even give us information about the person who lies behind the characterisation: "This underlying face cannot be manufactured. We have it from the outset; it has always been there and is inescapable. It may be frequently obscured by our conscious expressions. But the close-up brings it to light. It is not the face we wear, but our actual visible appearance that is decisive. For all of us appear in the end just as we are" (ibid.: 20).

My thesis is that in Vertov's *Kino-Eye* the close-ups are not (yet) necessarily employed for the purpose of serving ideological messages. Rather, their function

Fig. 7.29 *The Eleventh Year*: all close-ups of faces as the first frame of the shot

was more to show the people observing and being observed. The former category includes, above all, the children, perhaps the pioneer in conversation with the beer drinkers in the yard, while the homeless people, the inmates of the lunatic asylum and the Chinese magician are examples of the latter group. The visualisation in Fig. 7.28 gives an overview of the shots of people who could be assigned to one of the two categories.

Many shots belong to the episode with the beer drinkers in the yard. An interesting triple constellation, incidentally, develops in the editing; while the pioneer agitates with the drinkers, the children sitting high up at the window are also simultaneously following this action. A situation created by Vertov through editing. In this episode, also distinguished by one of the rare animation sequences in Vertov's films, the essence of *Kino-Eye's* content is crystallised, as further confirmed by the film-maker himself in his writings: "A large theme: home-brew - cards - beer - shady business; Ermakova - cocaine - tuberculosis - madness - death. A theme to which I find it difficult to give a single name, but one which I contrast here with the themes of health and vigor" (Vertov 1984c [1926b]: 75).

At several points, Vertov uses dissolves to pass from faces he shows in close-up to actions or objects with which they have, as yet, no relationship. This primarily takes place when such a relationship between a person and their task is to be produced; the peasant woman's face is thus followed by a sheaf of grain. In other cases the dissolve following the observing person leads to the object; a boy peers at the elephant that has arrived in Moscow or the girl scrutinising the pub, which is

considered the "enemy" because it was ereceted against the Soviet understanding of leisure time spent well. The function of the faces is first and foremost to imitate the public's gaze – the faces are doing the looking for the public. In his later films, too, Vertov made similar use of faces but arranged them in groups, thus intensifying their effect.

The Eleventh Year: Faces as Bearers of Messages

In *Kino-Eye* close-ups of faces are still spread out over the whole film and not incorporated into discrete episodes. In *The Eleventh Year*, Vertov proceeded in a formally different manner. It is apparent, even on a first viewing of the film, that close-ups have a different function here. But more precise information is only obtained from an investigation of the composition of the images and the formal and content-related design of the episodes in which they are embedded. A first step towards the analysis is an overview of all the close-ups that appear in *The Eleventh Year*, in order to get an idea of their number. With the assistance of a visual montage of the first frames of all the shots in the entire film, 64 relevant shots can be identified (Fig. 7.29).

There are 36 shots showing women in close-up, as against 27 shots showing male faces. It is noticeable that they are often filmed from below, but none are filmed from above. This impression is heightened by the posture of the people's heads. In more than half of all the shots, the people also direct their heads or eyes at the sky in the course of the shot. The direction of the gaze, in every case, has a semantic motivation; the shots surrounding that of the person inform us why the person's head is raised or eyes look upwards. The design of the image composition leaves no doubt; Vertov is presenting us with proud and happy people, whose raised heads are looking towards a better future or are happily and attentively listening – either directly or through loudspeakers – to the words of their political leaders.

For the most part, the close-ups are placed in an explanatory context through simple but effective parallel editing. In *The Eleventh Year*, Vertov overwhelmingly and very effectively used close-ups of these faces, with which the public could easily identify, to transmit his political messages. By using these types (peasant woman, worker, sailor, woman soldier), he unambiguously let it be known how the film was to be interpreted; his characters personify an ideal public, united in joyful gratitude, astonished at the achievements of the Soviet Union. Vertov described these people, seeing and hearing with conscious alertness, who have not fallen under the "soporific" effect of the traditional feature film, but actively respond to their environment: "We need conscious men, not an unconscious mass submissive to any passing suggestion. Long live the class consciousness of the healthy with eyes and ears to see and hear with! Away with the fragrant veil of kisses, murders, doves, and sleight-of-hand! Long live the class vision! Long live kino-eye!" (Ibid.)

In *The Eleventh Year*, the messages absorbed with such attentiveness are still political; in *Man with a Movie Camera*, it is the cinema experience itself that is dealt with in concrete terms, for example, when one sees Svilova working with great

Fig. 7.30 *The Eleventh Year*: the "electrical pylon"episode

Fig. 7.31 *Man with a Movie Camera*: Kaufman during the shooting

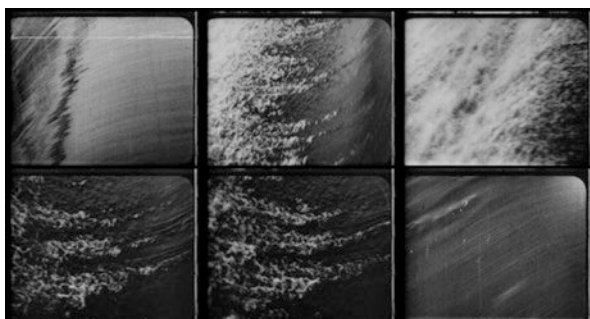**Fig. 7.32** *The Eleventh Year*: waterfalls at the finale

Fig. 7.33 *The Eleventh Year*: the "sailor" episode

Fig. 7.34 *The Eleventh Year*: the "international guests" episode

Fig. 7.35 *Sixth Part of the World*: globe with Clara Zetkin

concentration at the editing table. In *The Eleventh Year*, Vertov edited these faces next to events which were spatially and temporally separate from the protagonists. In this way, several women's faces are united as a virtual group, smiling together as they watch a workman at an electrical or telephone wire. At the end of the film,

Fig. 7.36 *The Eleventh Year*: the "march" episode

Fig. 7.37 *The Eleventh Year*: the "loudspeaker" episode

close-ups of striking faces are extracted from a crowd of listening women and effectively edited together with fast cutting. In this fascinating way, Vertov created his rhythm through the interplay of event and observation (Fig. 7.30).

Apart from a few isolated shots, all close-ups are grouped in five episodes, to which I have given titles appropriate to their subjects, in order to make the analysis more comprehensible: "electrical pylon" (Fig. 7.30), "sailor" (Fig. 7.33), "international guests" (Fig. 7.34), "march" (Fig. 7.36) and "loudspeaker" (Fig. 7.37).

In the "electrical pylon" episode, there are close-ups of faces in 20 shots, the man on the pylon featuring in only 9 of them. Not untypical of Vertov is the framing of this episode by a waterfall, which opens and closes the subject of the (electrical) flow of energy not only in a metaphorical sense but also constitutes a concrete illustration, as it brings parts of the process of the generation of electricity into the picture. In earlier footage in the film, this motif had already been heralded with various shots of electrical pylons and waterfalls. Vertov used flowing water not only as a framing device for episodes and to denote transitions. In *Man with a Movie Camera*, he also made extensive use of the motif, from the most varied angles, simultaneously exposing the methods of photography. For this, Kaufman had to bestride an adventurous suspended construction, making the most impressive images possible (Fig. 7.31).

A further function of waves of water had already been presented by the director in *Sixth Part of the World*, in which sheep are washed in the sea. The aesthetic experience of the breaking waves is still shown after the man who had washed the sheep has departed from the frame. Here, too, the water marks a transition from the capitalist world (NEP Russia) to others. This powerfully cleansing effect is repeated elsewhere in the film; this time animals are bathed in a river. In *Kino-Eye*, waterfalls also denote the transition from the city to the country, suitably visualised with dissolves. And, not least, with his montage of waterfalls, Vertov plays with the kinaesthetic effect on the audience, which both camerawork and editing additionally emphasise. Passages such as the end of *The Eleventh Year* are textbook examples of trajectory phrasing as discussed by Pearlman (Fig. 7.32).

But to return to the faces in the "electrical pylon" episode, at the beginning of the episode, the man and the various women are still edited in parallel, with the proportion of faces gradually increasing until, by the end of the episode, there is nothing else. Incidentally, Vertov edited in two of the women again at the end of the film in a different context, with their significance shifting from a very concrete statement (happiness at the improvement of the infrastructure) to a more general one (happiness at the development of the Soviet Union). In *Kinopravda No. 23*, Vertov also combined the raising and putting into operation of a telegraph pole with faces in close-up, although the montage there is not very developed. The workman appears, as if he were on the stage of a theatre, and professionally begins to climb the pylon. As soon as he has exited the frame, in a formal sense vanishing into the sky, his movement upwards is seamlessly continued in the next shot. This progress is interrupted by a group of putative village women who follow this act of modernisation with smiles, as they will ultimately be the beneficiaries of the result. The faces in this episode look from right to left or from below upwards. The workman, too, is oriented left, perhaps in order to emphasise the total concentration on the event with a joint direction of gaze.

At the beginning of the episode, the visual dialogue between the workman and the individual women is emphasised by having the images of the installation process alternate with images of the spectators. Subsequently, the close-ups of the faces follow in rapid succession, which suggests a collective, but nonetheless diverse, gaze at the man. The procedure described is one that Vertov frequently used at the

end of a reel or an episode, in order to recapitulate and emphasise the superordinate messages by means of an increase in the speed of the sequence of shots. In summing up, two lines of argument could be formulated in this episode, formally developed by Vertov: water as a metaphor for the electrical flow of energy and the village women as a metonym for the community.

In another episode the gazes are directed quite differently, with rows of faces (Fig. 7.33), for there the all-round view is a sign of concentration on an important task. This episode, which is located at the middle of the film, is already heralded in the previous shots by a combative intertitle – "In Heroic Striving Towards Socialism".

In this short episode, a close-up of a sailor appears most frequently (five times), followed by intertitles and a sentry (three times each) and a ship (twice). First the sailor is introduced by an explanatory intertitle and subsequently contextualised, by means of his ship appearing in the image. The sentry is introduced in the same way, although the latter is immediately linked to the sailor through parallel editing, so that eye contact is filmically established between both people. The communication between the two is also accentuated by the way movement of their heads is cut together; first the sentry looks left, while the ship enters the image from right to left and then, however, turning right in a longer shot. In the next shot the sailor also turns his head right.

The condensed linking of the two men establishes the relationship between at least two different elements of national defence: the Black Sea fleet and guarding of the Volchovstroj power plant. In Vertov's argumentation, the serious and concentrated faces transmit that the Soviet Union is in good hands. Not only is there a readiness to extend the national defence to the sea at any time; the supply of power is also guarded by the military. Water constitutes the binding element here and will be given a further ideological charge in the course of the film. At the end of *The Eleventh Year*, it is no less than Lenin who watches over the flow of energy. Vertov edited a statue of Lenin, parallel to other motifs, but while doing so gradually and almost imperceptibly altered the shot sizes. This is done still more expressively in *Three Songs of Lenin*. With this formal artistic device, the director breathed "life" into a motionless figure and ascribed to it an additional ceaseless vigilance. The sailor, the sentry and Lenin, as well, thus share the attentive, protective gaze at the defence of energy production. In *Man with a Movie Camera* and *Three Songs of Lenin*, we also encounter the militiaman who oversees the traffic light. The references to the poetry of Vladimir Majakovskij are very present at this point, even if Vertov does not write about it explicitly. Two poems in particular ought to be mentioned here, "Chorošo!" ("Good!") and "Stojaščim na postu" ("We stand on guard") from the year 1926. In the latter poem, especially, the following line in Majakovskij's characteristic typography is an informative reference:

Militiaman,

    the darkness of the outskirts

pierce with your eyes

    sharper and more watchful! (Vladimir Majakovskij)

An additional conspicuous row of faces deals with the Soviet Union's international relations (Fig. 7.34), which Vertov illustrated by means of visitors from various countries.

In the "international guests" episode, Vertov also worked on several themes, which develop through the arrangement of the shots. For the most part they are faces (in 12 shots), three times intertitles appear. The remaining shots are divided by subject, as follows: airplanes (four times), cooperatives (once), industry and transport (five times) and parades (twice). The faces are in each case edited in parallel to these subject blocks. The film-maker took pains to include a wide spectrum in his choices, in order to keep the political slogans about tolerance towards people with different skin colours clearly in focus: Chinese, Africans and Indians are represented. People with darker skin are already present early on in Soviet films, for example, in *Red Devils* (1923, Ivan Perestiani) or *The Circus* (1936, Grigorij Aleksandrov), in which the USSR is built up as a positive example by contrast to the racism in capitalist countries. At this point Vertov shows us objects in motion, such as airplanes and trains, which make a dynamic contrast to the statically designed faces. There is, however, a correspondence between their movement and the direction in which the people filmed are looking; one looks at airplanes, while being in the same line of approach, and seeing/hearing the same speakers.

According to Balázs, "the size of the world's dimensions" could not be depicted before film existed, thus generating an emotiveness that no other art could match in this form: "A raging sea, a glacier above the clouds, a storm-lashed forest or the painful expanses of the desert – in all these images we find ourselves face to face with the cosmos" (Balázs 2001a [1924]: 54). What is the place of the human in this Soviet cosmos? Rather small and lost in the face of the gigantic dimensions and transformations of nature, or actually an equal? Vertov regularly introduces this aspect into his films and strengthens the impression that the new man in the Soviet Union is capable of surveying, controlling and shaping this great world. In *Sixth Part of the World*, Vertov even filmically overlays an entire continent with connection points, giving the impression of a space that belongs together (Fig. 7.35). In *Three Songs of Lenin*, too, he sketches out a universe in which the human is not lost but in close-ups – despite the endless sorrow – confidently gazes into the future.

At the end of *The Eleventh Year*, two episodes follow one another in rapid succession in which Vertov uses close-ups. In the episode "march" (Fig. 7.36) individual faces are edited in parallel to the scenes of crowds. This episode is unique in that faces are not the majority; seven close-up shots are outnumbered by nine shots showing either a crowd of unmanageable proportions (further emphasised by multiple exposures) or at least two people. Particularly striking is a shot with two sailors, which is repeated precisely. In his selection of faces, Vertov placed one of the already familiar village women in the centre, by incorporating her five times and matching the direction of her gaze to that of the sailors. Whereas her face reacts with a little more reservation to the parades, the other two faces in close-up (the main uniform and the woman with a dog) are both exuberantly jubilant Soviet citizens.

The immediately subsequent and final episode, "loudspeaker", concentrates on rows of faces, no longer encumbered by any ambivalence (Fig. 7.37).

Vertov makes use of the same procedure at the end of *Stride, Soviet!*; faces in close-up follow each other in rapid succession. The process is more compact here; close-ups may be seen in 15 shots. It is noticeable that many faces look upwards, some even holding their hands over their eyes as protection from the sun. Vertov rounds off the film by editing in a number of already familiar faces, as with the sailors or the village women. In terms of the faces that had not yet been used, it seems that the director strove for representatives of different age groups and ethnic groups. He was here pursuing a double political argumentation: while the public can identify with individuals, the message was simultaneously being transmitted that these people were part of the great Soviet nation. Vertov formally and impressively strengthened this message with multiple exposures, enabling him visually to multiply the crowds of people.

Beilenhoff points out that Soviet film art of the 1920s – unlike the developments in European or American cinema – did not conceive any "culturally critical negative images of amorphous masses". On the contrary, mass utopias are created in the Soviet films of this period, in which organic collective bodies are staged (Beilenhoff 2004: 53). Iconic films like *The Crowd* (1928, King Vidor) or *Modern Times* (1936, Charles Chaplin) are countered by works like *Battleship Potemkin*. As Beilenhoff presents it, Eisenstein created the individual face as the face of the masses, by liberating it from "its cultural cementation as the identifier of the singular" (ibid.: 54). The Soviet director was not so interested in bringing the face into the image as the privileged carrier of its respective individuality or to depict the expressivity of its features. Rather, he was "characterised by a deep scepticism regarding the face as the identifier of individuality" (ibid.: 57). It should therefore, rather, reflect the class and bear the characteristics of the social group, make-up, detail and marks – in brief: it should be typage (tipaž) (ibid.).

The interplay of individual and masses takes place mainly from shot to shot, not within the frame. One could even maintain that a design of opposites is taking place here; Vertov separates the faceless crowd from the close-up of a face and only then can communication be initiated. There is no "explosion" typical of the modern, no

Fig. 7.38 *The Eleventh Year*: flooding

Fig. 7.39 *Man with a Movie Camera*: crowds of people

"montage of attractions"; instead the images are edited together in harmony. The faces in close-up are not particularly expressive; more important are communicative characters with a positive, open appeal. Perhaps it is not coincidental that Vertov chose more women's faces, as representative of stereotypical good conversation partners. The crowd, on the other hand, remains faceless and is even artificially multiplied and alienated with dissolves, which is (still) very impressive as a visual effect. It may be assumed that Vertov and his crew were quite conscious of this. In fact, the bodies of the people are melded into one another so completely as to make it almost impossible to recognise even a single person.

One could hypothesise that this technically accomplished collective body is no longer even a human one. It is visible only in the distance and flows in one direction, as most consistently implemented in *The Eleventh Year*. In this film, the merging is achieved through formal processes on the horizontal axis, whereas in *Man with a Movie Camera*, the depiction is more of a static image teeming with life. The images of the water and the crowds of people are, however, not juxtaposed merely by chance; in *The Eleventh Year* they even form a kind of bracket, leading from the necessary flooding of a village to people, who themselves become a rushing stream of energy (Figs. 7.38 and 7.39). In both cases, Vertov denies us a precise look at details, with pure movement taking centre stage as the main cinematographic device.

Visual Depiction of Rows of Faces in The Eleventh Year

In the following chapter, the rhythm of faces in *The Eleventh Year* is to be visualised. The correlation between shot length and image content for the five episodes will be presented in triple view, i.e. a graph consists in each case of three parts, which represent the same episode. The upper part of each graph shows the shot lengths by means of a bar under the first frame of the shot. In the middle section of the graph, by contrast, the shot length is made visible through the vertical position

of the frame (y-axis). In the bottom part of each graph, the first and last frames of a shot are visualised, which can give indications as to the composition of the shot. The thesis of an overwhelmingly static design of the rows of faces may be either supported or falsified by simple comparison of the frames. The choice of three visualisations should also be seen as an attempt to show the applicability and potential of different kinds of visualisation. The shot lengths for the first episode, "electrical pylon", may be visualised as seen in Fig. 7.40.

In the upper and middle graphs of this illustration, it may clearly be seen that the shots towards the end of the episode consistently become shorter. At the same time, the bottom graph may be used to support the thesis that in *The Eleventh Year* Vertov overwhelmingly designed the shots with faces to be static: "They contain a single 'burst' of information, presented on the screen just long enough for a viewer to absorb it, and then are replaced by the next burst" (Manovich 2013). Manovich goes on to write that along with the information about who is working and what the work is, the superordinate theme of work is also being communicated: "Because they feature movement, they don't just signify 'work' – instead, they are motivating the viewers to join workers they see on the screen" (ibid.). After analysing the individual episodes with faces in close-up, one should add the supplementary correction that Vertov wanted to motivate the workers not only to work but also to political issues.

The increase in speed in the course of the episode could illustrate that the successful communication and the exchange of information creates a familiarity between the conversation partners. All can thus communicate with each other faster, through eye contact alone, and know what is going on – energy can flow unimpeded and ever faster. In this way, one of Vertov's basic procedures becomes clear: information is first presented, and new images are introduced and formally marked; these images are then repeated and made increasingly familiar to the viewer; from that point on, the speed may be increased. The more rapid editing gives rise to new functions and meanings within the respective specific context, such as, for example, the emphasis placed on the flow of energy in the "electrical pylon" episode. Hicks describes a similar procedure using an example from *Enthusiasm*, in which Vertov links images to specific sounds and, after having established the procedure, always uses them in this combination (Hicks 2007: 77).

In *The Eleventh Year*, Vertov does not adhere to a uniform pattern in designing the shot lengths for faces in close-up. The function is also different in each episode;

Fig. 7.40 Motion intensity in the "electrical pylon" episode of *The Eleventh Year* in various visualisations: with bars (above), according to height on the y-axis and first/last frame of a shot

Fig. 7.41 Motion intensity in the "sailor" episode of *The Eleventh Year* in different representations: with bars, according to height on the y-axis and first/last frames of a shot

Fig. 7.42 Motion intensity in the "international guests" episode of the *The Eleventh Year* in different representations: with bars, according to height on the y-axis and first/last frames of a shot

"loudspeaker" is tuned far more for active direction of gaze, i.e. agitation, than "sailor" or "international guests". The fact that the "sailor" episode (Fig. 7.41) is edited more slowly is also connected to its content. The sentry at the power plant must make an impression of being prepared and concentrated, just like the sailor, in order convincingly to represent the national defence. In this case, the close-up's function has less to do with dialogue and more to do with showing the facial expression of the man on guard. The sentry is a powerful image, only introduced step by step through the change in shot size, leading ultimately to a double exposure with Lenin. The titles, incidentally, are the shortest shots in this episode.

By contrast, the longest shots in "international guests" are those of airplanes and travelling shots, the function of which may be simply explained: the effect of Soviet achievements must be permitted to unfold in the film and there must be time for precise observation, as this footage, unlike the faces, is very rich in detail. One must recognise and understand what it is that puts the international guests in such a euphoric mood. As the bottom part of Fig. 7.42 shows, the shots are constructed

Fig. 7.43 Motion intensity in the "march" episode of *The Eleventh Year* in different representations: with bars, according to height on the y-axis and first/last frames of a shot

Fig. 7.44 Motion intensity for the "loudspeaker" episode in *The Eleventh Year* in different representations: with bars, according to height on the y-axis and first/last frames of a shot

rather statically, people remain in their positions and they look upwards and only occasionally turn their heads.

The same explanations could hold for the next episode, "march" (Fig. 7.43); long shots of crowd scenes are given more screen time than images showing individual faces, to enable the public to take more time in processing the greater density of information.

The last episode, "loudspeaker", follows shortly after "march" and is, additionally, edited in close to the end of the film (Fig. 7.44).

Even though the end of the film is missing, it may still be assumed that this episode is already part of a more general and rapid finale, which Vertov planned for the film. In a manner typical of Vertov, many short shots are strung together, interrupted by longer titles. As the shots of the loudspeaker are just as short as those of the faces, it has been conceived as a "conversation partner" of equal value.

In principle, the visualisations are intended to illustrate the totality of such montage blocks. The three different kinds of visual depictions each offer different possible ways of looking and understanding; while the upper depiction amounts to an analytical presentation of the shot lengths, the middle graph provides a more intuitive access. By means of the information that frames arranged higher up stand for

longer shot lengths, we are able to move rhythmically through the film, or through its visualisation. The visualisation at the bottom shows the first and last frame of each shot and may give us an impression of the movement in the image. What is certainly clear here is the limited depiction possibilities of the print medium, which can only give an impression of the ideal visualisation, one which is interactive.

Concluding Observations

Two films, *Kino-Eye* and *The Eleventh Year*, were chosen for a detailed analysis, in order to demonstrate Vertov's varying presentations of facial close-ups. I would now like to attempt to formulate general principles, showing a form of evolution, based on an overview of all Vertov's feature-length films. In principle, Vertov's faces stand for Soviet people, with the proportion of men and women initially relatively balanced – until that balance shifts decisively in favour of women in *Three Songs of Lenin* and *Lullaby*. As early as *Enthusiasm*, men increasingly are negatively portrayed (as alcoholics), alongside the recurring appearances as industrious workers. In some cases, it is even possible to recognise the men earlier in the film characterised so unfavourably, this time in the dirty machine shops, i.e. either Vertov is depending on our unreliable memory for people or he is, after all, not being so precise in his presentation of good and bad characters. Women, in turn, are praised for their faith, although they, too, are linked to excessive consumption of alcohol, as in *Kino-Eye*. The close-ups of women are, nonetheless, still mainly reserved for positive examples and fine, expressive faces.

One may, in anticipation, maintain that the function of close-ups in Vertov's films undergoes a change over time. Certain procedures nonetheless remain constant. For example, from *Stride, Soviet!* on, Vertov overwhelmingly edits the faces of listeners in blocks, though here they are still primarily to be found at the end of the film. This procedure is repeated in other films. Margarete Vöhringer's observations of the film-going public at that time allow interesting relationships to Vertov's methods to present themselves.

To place this remark in context, it is worth mentioning the long tradition of experiments related to perception in the Soviet Union of the 1920s, extensively dealt with by Vöhringer in her book *Avantgarde und Psychotechnik*. Alongside artists and scientists, politicians, too, participated in the First All-Union Conference for Initiatives of the Scientific Organisation of Work and Management, held in 1921, at which the strategies for researching cognitive processes in art and society were discussed. One of the speakers was Vladimir Bechterev, founder and director of the Psychoneurological Institute in Leningrad, where Vertov also studied. This is actually not surprising because, as Vöhringer explains, Bechterev was known to facilitate academic education mainly for women and Jewish artists, like Vertov (Vöhringer 2007: 139). There not only was Vertov able to experiment with sound in his institution but also Abram Room and Vsevolod Pudovkin, both later to gain fame as direc-

tors, researched human perception. In his film *The Mechanics of the Brain* (1925) for example, Pudovkin investigated the Pavlovian reflex, while Room conducted studies which dealt with the audience perception. Bechterev's vision was that "filmmakers would study next to neurologists and neurologists would practice filmmaking". (Ibid.: 138) Film was seen both as a recording instrument and as a subject for research into audience guidance, above all via montage. Cinema was discussed widely and extensively as a tool for the guidance of audience attention and for the revelation of that which was invisible to the human eye (ibid.: 123). We can read similar thoughts in Vertov's writings.

At the same time, there was interest in the reception of different films by audiences, and research was carried out using questionnaires. More nuanced, and thus more instructive, are the so-called attempts to research the viewer, in which the interrogation took place during or after the film screening (ibid.: 164). In this instance, either the screening venue for the same film was changed, in order to arrive at differences among social groups, or a different film would be shown at the same cinema. The reactions of the audience were recorded in note form (when and why did it laugh, applaud, cry or display fright), and the public was questioned as to the quality of the film (Wurm 2009: 39). Ostensibly, one hoped for feedback that would be taken heed of in production, which Vöhringer found doubtful (Vöhringer 2007: 165). The direct and non-verbal recording (also photographic) of reactions – and it should be kept in mind that in many cases the subjects were uneducated peasants and workers who were not that good at articulating themselves – was intended to enable genuine and objective access to the audience's feelings. Invoking Darwin, who had associated the movements of facial muscles with particular emotions, material was surreptitiously collected which was to provide insight into the rural psyche. One problematic aspect of this was that there was a certain delay in the reactions of viewers to events on the screen; the photograph rarely corresponded precisely to the situation. The flash that was necessary due to the darkness of the cinema also had a disruptive effect on the reactions of the test subjects. Film footage also taken in these situations was better at reproducing the simultaneity, as well as optimising the analysis through the use of close-ups, slow-motion and freeze-frames (ibid.: 166). A territorial album of film subjects, stylistic devices and necessary techniques was aspired to.

The exact purpose of the experiments is still not quite clear. Did one want to improve film language in order to induce tailor-made reactions, thus conveying ideas? Or did one want to study the population's emotions, in order to obtain information about its mental state and possible strategies for its further development? Or was the decisive issue the interest of the film studios in analysing the effects of the films, in order to be able to define a good director? According to Vöhringer, it seems to have been less about actively involving the public than it was about the general production of photographs and film footage that could be utilised in various ways. In any event, the research seems to have remained at the biologistical level, or not to have been extensively developed beyond that. Whether, as Bordwell suggests, there were attempts to employ the results for evaluation in cultural schemes or narratological investigations cannot be gleaned from Vöhringer's book.

Fig. 7.45 *Man with a Movie Camera*: image within image

In Vertov's case, it seems rather unlikely that he participated in an audience reaction study, for, although an experiment with a hidden camera would have been in accordance with *kinoglaz* methods, it would have been difficult to carry out in a cinema. Vöhringer reports that for this reason ten people at a time were always filmed, while Vertov presents us largely with single faces. Taking into account the necessity of adequately lighting the subjects, it is hard to imagine such filming taking place without their knowledge.

Is it perhaps a conceit on the part of the director, to wish to experience the effect of his films directly? More than once, Vertov implies that we are witnessing such a procedure – we first see the film filling the whole screen and subsequently in the cinema, where the same film is then playing (Fig. 7.45). Here, too, it is hard to believe that Vertov would have been able to organise a cinema screening of his own films. The question then is: What were the people being filmed actually watching? Are they even watching a film? One may speculate that direct feedback is not the issue here; rather, we are intended to identify with the people shown and their positive reactions (Fig. 7.46).

But Vertov presents us not only with moviegoers but also edits in faces with loudspeakers (as a source of sound), as in *Stride, Soviet!* and *Sixth Part of the World*. A montage of the first frames of each shot in *Sixth Part of the World* can serve as an example (Fig. 7.47). There, the episode is even introduced with an explanatory intertitle, "and the radio lecture", and the listeners are edited in parallel with a loudspeaker in close-up.

For Vertov, art is supposed to help transform the real world. In this he is not alone; for Murav'ev cinematography becomes a comprehensive part of reality when moving images "projected on the sky as a harbinger of cosmic constructions expand the horizons of people" (Hagemeister 2005: 53). Apart from that, music as the sound of the spheres should be instrumentalised, to shift the masses in rhythmic movement and to inspire and harmonise them in their collective actions (ibid.). Michael Hagemeister points out that such a theatricalisation of daily life and rhythmisation of people can also be found with Trockij (ibid.). Even if Vertov's focus in the loudspeaker images is always on the broadcast of political speeches, the transformation of the Soviet street's everyday reality resonates. The leader's words, accompanied by presumably bright marches or classical music (as one could still hear not too

Fig. 7.46 *Stride, Soviet!*:
cinema spectators
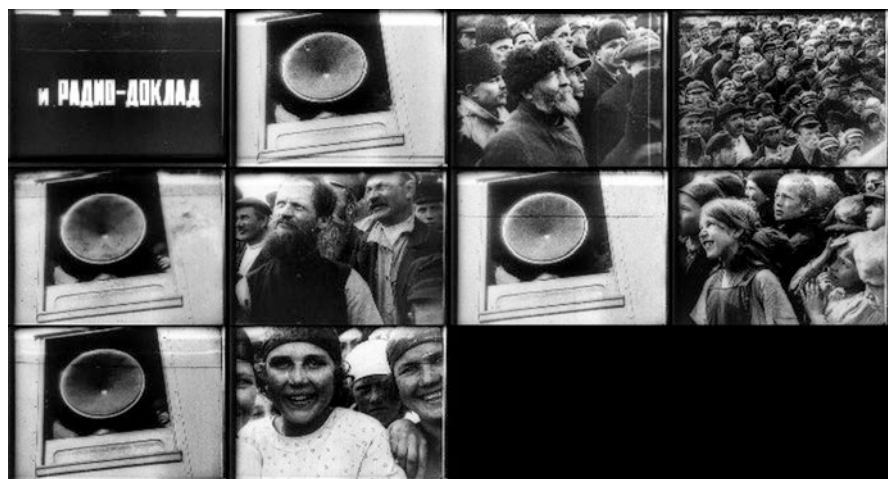
Fig. 7.47 *Sixth Part of the World*: the "listeners and loudspeaker" episode

long ago in Russia), transformed the lives of people strolling in the cities into a
perpetual stage. Radio, too, was naturally a propaganda instrument capable of con-
quering great distances in a concrete manner, as far as spreading the slogans of the
Communist leadership went. Vertov idealised the listeners, as he had already done
with the spectators, drawing a picture of a crowd paying rapt attention.

His eyewitnesses, however, are not always positive heroes. The more distanced
and critical observers and listeners, as in *Kino-Eye*, developed, over the course of
years (and films), into an integral component of the Soviet people. The opposition
between "we-they" or "I-they" – "they" being both the good Soviet citizens, as well
as the industrious pioneers – is gradually transformed into an all-encompassing
"we". The impetus towards national education and enlightenment of *Kino-Eye* also
made it necessary to show a population that was passive and potentially resistant. It
should be noted, though, that in later films Vertov distanced himself from this kind
of presentation. Close-ups of faces are subsequently reserved for those with affirma-
tive expressions and these are edited with other faces or appropriate events in such
a way that a visual dialogue develops. A good example of this may be found in the
film following *Kino-Eye*, *Stride, Soviet!*, which, on the pictorial level, is laid out
very dialogically.

Fig. 7.48 *Stride, Soviet!*:
comrades, speaker,
listeners

A longer sequence shows the speech of a young Communist and the reactions to
it of his audience (Fig. 7.48). Here, the address and the public are still arranged in
direct proximity, but no longer as tightly linked as in *Kino-Eye*.

Vertov subsequently experimented – fully in the spirit of Kulešov's creative
geography – ever more pronouncedly with spatial and temporal distances. His peo-
ple in close-up then see and hear Lenin's voice in the most remote regions of the
Soviet Union and their communication transcends the boundaries of countries and
languages. The cinema and the radio make it possible. Silent observers become
people with their own voices, under the right technical conditions. Oksana
Bulgakowa (2003: 58), too, differentiates the later *Three Songs of Lenin* from earlier
films and writes of Vertov: "Rather, he effaces the opposition of far and near in
thought, transgressing the frames of purely cinematic compression".

A few formal considerations follow these semantic remarks. According to Kaes,
the close-up is isolated from the narrative context: "Whenever a close-up is inserted
into the action taking place, the action stands still for a moment, the film becomes
an object of pure curiosity" (Kaes 2000: 160). The narrative flow is interrupted in
order to address the spectators' feelings.

In *The Eleventh Year* (as in other films), Vertov effectively accelerates the film's
speed with his rows of faces. It is not the individual face that is to be studied, even
though it has been painstakingly selected; rather, by means of their rapid succes-
sion, an impression is generated of a personalised mass of people. The public's aim
is not the precise reading of the characters' facial expressions, as Kaes notes (ibid.),
nor need it be; they are mainly happy citizens or fascinated filmgoers. Our gaze
remains on the faces just long enough in order to understand where they are looking
and to whom they are listening. As we may assume that in most cases Vertov artifi-
cially combined event and reaction, it would be interesting – though beyond the
scope of this book – to research the actual shooting (e.g. in the cinema
auditorium).

In addition, one could propose that an avant-garde rejection of any kind of
inwardness may be found at first in the way Vertov deals with close-ups of faces. As
Alexander Flaker explains, the avant-garde recognises no characters in the tradi-
tional sense; figures appear only as symbols, that is, as the conveyors of certain of
the author's conceptions within the structure (Flaker 1989: 36). One should not
expect reflections of an inner world, or information about intimate feelings, in
Vertov's early films; this matches Beilenhoff's analysis of Eisenstein's *Battleship
Potemkin*. In *Man with a Movie Camera*, Vertov even went one step further and
presented the gazes of artificial faces; the display window dummies filmically

Fig. 7.49 Lenin archive material in Vertov's films

communicating with one another in close-up could thus be seen as Vertov's avant-garde highlight, with any inwardness being taken to absurdity.

The more the director's creative freedom was curtailed after 1930, though, the more often he chose to use close-ups of expressive faces in shots of long duration. In *Three Songs of Lenin*. the public is also emotionally involved; the shots last longer when the camera roams over the faces in long spans. Vertov no longer ventured formal experiments, such as juxtaposing inanimate and living faces with one another as equals. The public now can and should read and feel the pain and the sorrow of the Soviet people directly from the women in close-up. In discussing *Battleship Potemkin*, Beilenhoff speaks of a "poetry of the conjunction and transformation of individual and mass" (Barck, Beilenhoff 2004: 57). This makes use of the three parameters figure, face and gaze. In Eisenstein's film, the following arrangement of people in the image is typical: in the foreground the face and behind it, dimly, further people who move (ibid.). This does not apply to Vertov's early films (up to *Three Songs of Lenin*); the faces represent themselves and seem sometimes to burst the frame of the image, so tightly is it measured, in order to depict the greatest possible amount of information.

Vertov's faces in close-up are, as already said, not dramatically connoted but happily, determinedly or attentively watch the scenes, the country and the future. Communication with the masses is not only fluid in a metaphorical sense but is even visibly thus expressed at a certain point at the end of *The Eleventh Year*. Not until *Three Songs of Lenin* do the faces become partly sad and despondent. Here, in contrast to his previous films, Vertov arranges mournful faces in close-up rows. The camera floats along the women's faces, now no longer filmed in close-up but partly in a common closed frame, in order to emphasise the collective grief. A clear break manifests itself with the faces used up to this point, which largely occupied single shots on their own.

In *Lullaby* this development finally reaches its culmination. The people are now individualised and, in addition, frequently seen in dialogue with Stalin. Now the faces must be visible. Vertov therefore gives his protagonists a face in the truest sense of the word and, furthermore, a voice. One could postulate that people are by now no longer permitted to be part of a visual experiment, which had been accentuated by the means at the disposal of the silent film, such as editing.

In summary, one could say that faces in Vertov's films fundamentally function on several levels. They are themselves charged with semantic significance as Soviet characters (such as the sentry or the man on the electrical pylon) but are invested, beyond that, with a contextual meaning (e.g. the village women or the international guests). Vertov's faces, to varying degrees, transmit emotions (ranging from euphoric joy in *The Eleventh Year* to pain in *Three Songs of Lenin*) and are the authentic witnesses of the country. While faces (both human and artificial) are only briefly to be seen in the films up until 1934, with *Three Songs of Lenin*. the respective shots become longer as their function simultaneously changes. Not least, faces in close-up are, in a purely formal sense, a significant component of the filmic rhythm.

Political Power: Lenin and Stalin as Film Subjects

It is not possible to view the artistic application of the avant-garde in detachment from its political context. In the Soviet Union, the Department of Agitation and Propaganda of the Communist Party's Central Committee headed an enormous propaganda apparatus for 70 years, giving its directives to the Party organisations. There they would be further processed by writers, journalists and artists into mottoes and slogans for specific occasions. Hicks describes, inter alia, the special features of the Bolshevik concept of newspaper activities, which did not provide for objectivity, press freedom or independence (Hicks 2007: 9). Propaganda (from the Latin propagare, for spreading further, extending, reproducing, grafting) originates in the ecclesiastical field and was not used in the sense of "making propaganda", i.e. to promote something, to spread something by means of propaganda, till the nineteenth century (Strauß, Haß, Harras 1989: 303). The term agitation, in turn, was, with its noun, "agitator", borrowed from English in the early nineteenth century. It had a political connotation from the start, at first a positive one, becoming then increasingly more negative and applied to the most varied of groups and their leaders. The term in English is formally based on the idea of "setting in motion" (Latin agitatio) but in the development of its meaning still very dependent on the underlying Latin agitare, to operate something substantial, to incite, to whip up, to stir up or to foment (ibid.: 53).

Whereas propaganda as an instrument of systematic training and education in Marxist-Leninist theory was initially aimed at a limited circle of people (Party elite, functionaries) but subsequently also at the general population, agitation was, from

the start, understood as the task of everyday political mass influence, with agitation as an instrument of political education directed at the specific Party information of further population groups. Both of the keywords "agitation" and "propaganda" came to be twin terms within the political language of the Socialist and Communist countries (ibid.: 305). According to Marxist-Leninist understanding, agitation and propaganda are inextricably linked as means of class struggle (Agitprop). They differ from one another (according to Lenin) only in that the (politically and scientifically more highly valued) propaganda transmits more ideas to fewer people, while agitation transmits fewer ideas, or perhaps even only one, to many people (ibid.: 54). The term propaganda, however, can acquire a strong negative value when it refers to corresponding operations emanating from an actual or assumed political-ideological opponent.

In Europe and in the USA, Vertov is first and foremost known and esteemed as an avant-garde film-maker, a reputation based on *Man with a Movie Camera*. Not until the 1960s was the whole of his oeuvre discovered, received and shown to the public by film scholars and various admirers. The tendency, however, was still to omit the films from 1934 on *Three Songs of Lenin*, dedicated to Lenin, and *Lullaby*, in which Stalin is depicted as a larger-than-life leader figure. The critical attitude to political influence may be assumed to have played a part. One may repeatedly observe Western viewers judging *Three Songs of Lenin* and *Lullaby* as trite propaganda, in particular, the excessively positive portrayal of Stalin as an endorsement of the cult of leadership. But in other films, too, that are overwhelmingly considered avant-garde works par excellence, many commentators discover nakedly political messages. In other words – and in exaggerated form – in the West one is still occupied with the question of how Vertov is to be understood, as a constructivist visionary who was only experimenting with the possibilities inherent in the new technical medium or as a political director who, from the mid-1930s, paid homage to the cult of personality. Naturally, we are today sensitised and critical as regards propaganda and, in addition, understand documentary film in a different way, as Martin Loiperdinger has pointed out: "For Grierson and his contemporaries there was no opposition between documentary film and propaganda. The odium of the reprehensible has attached itself in the West to the word propaganda only since the Allied victory over National-Socialist Germany" (Loiperdinger 2001: 78).

The equation "transmission of political statements" plus "portrayal of the political leadership" equals "political film-maker" is certainly not a correct one. Apart from that, it cannot be the goal of formal film analysis to extract clear political attitudes on the part of Vertov. If, however, one limits the question to a search for the retention or jettisoning of procedures in the spirit of the *kinoglaz* concept from the beginning of the 1930s, some interesting indications regarding Vertov's artistic consistency may be found.

If one uses the formal aspects as a guide in analysing how Vertov depicted the two political leaders of his era, my proposition is that, through the artistic design of the footage in *Three Songs of Lenin* and *Lullaby*, he used image and sound to accord a different status to Lenin and Stalin. While the person of Lenin structures the first
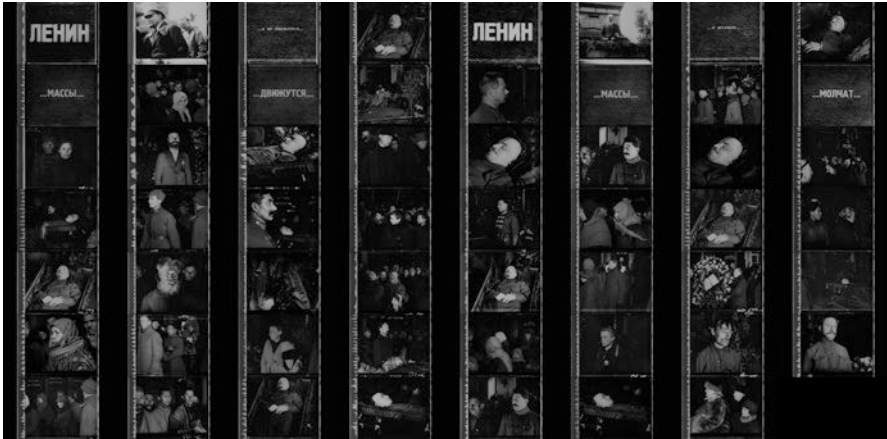
Fig. 7.50 *Three Songs of Lenin* (sound 1938/1970): at Lenin's coffin, Stalin appears in the picture twice

film and even dictates a kind of narration – Lenin dies, life afterwards – Stalin remains in the foreground as the hero of the second film but is not woven into it in the familiar way, through complex editing. In both cases, Vertov and Svilova had little material at their disposal but made very different use of it.

Lenin as Beloved Leader

Lenin could always be seen in Vertov's films even before *Three Songs of Lenin* but usually only in very few shots and not as a living presence, rather as a picture or a statue. Statements about Lenin's presence or absence in Vertov's films can be made quite easily on the basis of the montages of the first frame of each shot. In *Kino-Eye* we see him appear as if from nowhere behind two pioneers as a poster on a wall (Fig. 45) – a complex dissolve, which, in my opinion, lends itself to a humorous reading. In *Stride, Soviet!*, the founder of the Soviet state appears only at the end of the film – with little justification. We see the body lying in state, but Vertov seems to find the cameraman filming Lenin more important. In *Sixth Part of the World*, too, Lenin appears just before the end, though (at least) as a larger-than-life image hanging on the wall of the Kremlin. In *The Eleventh Year*, Vertov follows this pattern and incorporates Lenin into a dissolve with a waterfall. This shot is, in fact, important for the film and symbolises, in modified form, the famous slogan "Communism equals Lenin plus the electrification of the country", but Lenin is limited to this one appearance. In *Man with a Movie Camera* and in *Enthusiasm*, Lenin is not to be seen at all. This conspicuous absence may perhaps be due to a shortage of material. At this time, Vertov was working in the Ukraine and may have had no access to the

archives. In general, Vertov and Svilova were always on the hunt for Lenin footage, as we know from diary entries. *Three Songs of Lenin* is without doubt the film-maker's most comprehensive and concrete film about the Russian leader. Ten years after Lenin's death, he was entrusted with making an anniversary film to commemorate the day. Due, however, to shortages of film stock at the beginning of the 1920s, only very few shots of Lenin from his lifetime were available; his lying in state was somewhat better documented. Svilova therefore viewed material in archives in Moscow, Baku, Tiflis and other cities. She was thus able to unearth ten additional film documents, which Vertov painstakingly registered (Vertov 1967 [1934]: 30), some of which he used in *Three Songs of Lenin*. Vertov incorporated a total of 24 shots of archive material from various sources showing Lenin in person into his films (Fig. 7.49).

Three Songs of Lenin has as its foreground narrative the successful fight against illiteracy and the introduction of electrical power to remote parts of the vast country, as do other Vertov films. The editing conveys the impression that the various ethnic groups constitute a homogeneous community and that, in contrast to the capitalist states, they are free of racist thoughts and xenophobia. The peaceful unity of the Soviet peoples, as also suggested in *Sixth Part of the World*, manifests itself in *Three Songs of Lenin* in the shared sorrow for the dead leader, Lenin, who led the people towards a better life after they had withstood the civil war between 1917 and 1921. In individual shots, Vertov also gave filmic form to actual Party slogans. The original quote from Lenin, "Communism is Soviet power plus the electrification of the country", for example, is illustrated by a village woman (characterised by her traditional costume) turning on a light bulb in her yurt or by nocturnal Moscow bathed in brilliant light. The film-maker also promotes the arrival of radio in remote settlements where people expertly handle the radio receiver and loudspeakers are set up all around. Vertov's message here is unambiguously that the Soviet Union has brought progress to the villages and thus enabled their connection to the civilised and industrialised world.

Lenin is clearly the hero of *Three Songs of Lenin* and also provides its formal structure. This is already stipulated in the title, is continued in many emotional intertitles and is strengthened yet further by the music, above all in the traditional songs dedicated to Lenin. He appears for the first time in the film's second part (at the beginning of the second song). The appearance of a political leader, whether Lenin or Stalin, only after a lengthy introduction was a procedure that Vertov once more followed in *Lullaby*. One sees the dead Lenin, in close-up, lying in his coffin, which must have had the effect of a shock after the happy first part. Only after this first visual impulse does Vertov chronologically document the transfer of the body to Moscow. In the subsequent sequence we can, however, see the living Lenin. These shots are edited in parallel with the dead body lying in the coffin, past which the crowds of mourners file. Subsequently filmed grieving women in close-up are linked with the funeral procession by means of editing and strengthen the impression.

The funeral procession is the semantic emotional centre of the film, appearing in almost identical form in *Kinopravda No. 21*. It is precisely at this thematically vital

Fig. 7.51 *Three Songs of Lenin* (silent 1938): at Lenin's coffin, Stalin appears once in close-up, introduced by the title "Com. Stalin"

point in the film that the political statements must be depicted unambiguously and convincingly, as this is the appropriate moment to demonstrate the provision for Stalin's succession. It is therefore interesting that Vertov designs this episode differently in the silent version of *Three Songs of Lenin* than the way it appears in the sound version. The sequence of shots in question can be understood according to the preserved prints from 1938. In Figs. 7.50 and 7.51 an overview of this section of the film is provided by means of the first frame of each shot.

In the silent version, Stalin can be seen only once, though he is clearly identified by an explanatory intertitle, as, incidentally, are the other personages, and his image is larger than theirs. He is the first of the visiting mourners to be seen after the general intertitle. In the sound version, the same shot is edited in twice and on both occasions Stalin is inserted between pictures of the dead Lenin – a perhaps subtle, yet nonetheless characteristic, editing touch. As far as Stalin's role goes, the episode remains overall neutral or inconspicuous in both versions – he is one of the mourners at the coffin and is given no special treatment in a formal sense. This pattern is also followed by Vertov in his next film, *Lullaby*.

In *Three Songs of Lenin*, Lenin is first of all portrayed as a leader who is close to his people, beloved, benevolent and progressive, one who will continue to live for the Soviet people in deeds and ideas. Although the construction of the mausoleum met with considerable protest on the part of traditional Marxists and leftist artists – it belonged to Asiatic customs and barbaric rituals (Groys 1996: 74) – Stalin was nevertheless happy to take on his new role of high priest, as the Russian philosopher Michail Ryklin explains:

> What is, in any event, amazing is the speed with which the new cult arose; less than a week after his death, Lenin's body was already lying in a wooden mausoleum designed by the architect Aleksej Ščusev. On the same day a guard of honour was established at the gravesite. The last resting place arrived at its definitive form in 1930; this time marble, granite, porphyry and labradorite were used in the construction of the mausoleum. On ceremonial occasions the living Party leaders stood on the mausoleum – Stalin, who at this time definitively consolidated his status as high priest, right at the front. Many pilgrims understood the analogy of the Lord literally (i.e. fundamentally wrongly, from the point of view of the Party orthodoxy). For them, Lenin was the new Christ. (Ryklin 2008: 27)

The archive material of Lenin in *Three Songs of Lenin* is overwhelmingly introduced by intertitles referring to the qualities of the state's founder. His exterior, for example, is described in the intertitles with "he had eyes full of irony and shining with understanding". He is depicted as a fiery orator who enthused crowds and yet was still "open and simple to deal with". Lenin's close relationship with the common people is emphasised when one sees how he extends his hand to them, converses with them and permits himself to be addressed by his first name. Lenin, though a real statesman, still stands in the midst of his people and not only on the dais or at the podium. Not till *Lullaby* does Vertov invest Stalin with these folksy and paternal attributes; in *Three Songs of Lenin* (silent 1938), he still stands unapproachably high on the Kremlin wall next to his comrades, only waving at the crowd from a distance. The dead Lenin is edited in parallel with the sorrowing people, whether women in close-up, pioneers filing past or the leader's companions. Lenin is thus a participant in a dialogue with his people, one which persists beyond his death. MacKay describes the transformation of Lenin into a universal redeemer:

> It seems best to assert that the Lenin of Three Songs functions as a kind of guarantor of the ultimate mutual inter-translatability of the four levels indicated above. Lenin is at once the exemplary revolutionary person (moral), the great theorist of communism and founder of the USSR (anagogical), and a folk hero to the "people" (literal); as the great "electrifier" or modernizer of the country, he can be assimilated to the more properly Vertovian "allegorical" level as well. (MacKay 2006: 385)

Already in an early text, Vertov praised Lenin as the "first great *Kinok*", who designated the cinema as the most important art for the workers and the newsreel as the most important genre of all (Vertov 2008c [1925a]: 63). Neither Vertov's writings nor his films indicate that he ever changed his mind about this.

Stalin in Vertov's Films

The presence of Stalin in Vertov's films is, by contrast, an eventful history of addition and removal. Even a superficial familiarity with the prints that have been preserved can easily lead to the impression that it is not until *Lullaby* in 1937 that Stalin plays a greater role and that in the earlier *Three Songs of Lenin* he is only one person of many seen. By and large, *Lullaby* is seldom shown in cinemas and correspondingly seldom discussed by film scholars and critics, which is an indication of its

status as one of the most problematic Vertov films, from the reception point of view. The actual state of affairs regarding the prints that have come down to us is still unclear, although it may be assumed that several of the director's films were "enriched" with images of Stalin in the 1930s, with these presumably removed again 20 or 30 years later. It was not only Stalin who was inserted in these cases; the films were generally "updated" with footage of important political and cultural events. Although current research has not yet led to written evidence in Russian archives of the film prints' reworking, some interventions in the preserved prints can, to a certain extent, be understood with the help of documents that accompanied the films, such as editing lists (montažyj list) or intertitle lists.

The best-known case of reworking with political background is certainly *Three Songs of Lenin*, but even earlier, in the case of *Sixth Part of the World*, two versions exist with variations in the images of Stalin. While the version of the film that exists in archives in the West does not contain a single shot of the dictator, a print preserved at RGAKFD in Moscow contains a whole series of shots of Stalin. In this version he appears without much introduction at the end of the film, almost as if one had simply appended the dictator to the film without any special concept – wherever it was technically simplest to do it. It is not at all clear whether Vertov himself had anything to do with these alterations.

The differences between the prints of *Sixth Part of the World* can unfortunately only be transmitted in the present volume (Fig. 7.52) as "defects" in a montage of the first frame of each shot in the GFF/Austrian Film Museum print and by means of a verbal description. In the graph, the first frame of each shot of *Sixth Part of the*

Fig. 7.52 *Sixth Part of the World* (end of the film): montage without Stalin

World was consciously selected, as the traces of the splices (or, more precisely, the tape at the top border of the frame) may be clearly seen.

Whether the shots with Stalin were already present in 1926 or whether they were only inserted in the 1930s cannot (yet) be determined. In any event, the film was later "de-Stalinised" in the GFF, presumably in the 1950s, as the shots are no longer present in the version preserved there. Following the first intertitle, "I see", Stalin is seen delivering a speech (missing from the GFF/Austrian Film Museum print illustrated below). Hicks points out that the last title of the film deals with a speech by Stalin at the 14th Party Conference in December 1926. Unfortunately, he does not count the relevant intertitles individually (Hicks 2007: 46).

The sequence in question is one which has also been preserved in the sound version of *Three Songs of Lenin*, which could indicate its "reworking" at the same point in time. The shots have been edited in parallel with the following intertitles: "Stalin" (missing here as an illustration), "We want to produce by ourselves", "not just cotton", "but also the machines that we need for the production of cotton", "We want to produce by ourselves" and "not just tractors". From the title "but also the machines to produce the tractors", the RGAKFD print matches the version held at the GFF/Austrian Film Museum. Only after the title "socialist" is there an additional title, "society", following which both versions are again identical for 19 shots. Only before and after the title "oppressed countries" are the images from the Stalin speech edited in again. From the title "in the flow" until the end of the film, there are again only occasional fragments, a few frames long, of this shot with Stalin.

As far as form goes, this piece of editing could be seen as rather uninspired. The merely brief repetitions of images that are always the same could be due to a dearth of footage, as a single shot seems to have been split into several. But even if the construction is a recreation of the typical Vertovian progression, imbuing the images with an emotional charge, their effect remains limited. The political message, likewise, remains vague; while Lenin's poster, affixed to the Kremlin wall, watches over all as thousands of people gather beneath it, Stalin stands isolated and hemmed in by the border of the frame at his speaker's podium (Fig. 7.53).

Fig. 7.53 *Sixth Part of the World* and *Three Songs of Lenin* (sound 1938): Stalin speech

The case of *Three Songs of Lenin* is in many ways more complex but, fortunately, also better documented. This is due to the fact, mentioned earlier, that official editing lists of the film were prepared and published by Sojuzdetfil'm on 21 January 1938, namely, for both versions (sound and silent). The sound version of this film was produced first (1934), the silent version in the following year. It may be assumed that both films were reworked by Vertov in varying degrees in 1937/1938. In a comparative analysis, the paper documents can at least provide information about the first versions and their structure as relevant to Stalin. In a further step, the production of the de-Stalinised version of 1970 is discussed, and, in addition, several differences between the silent and sound versions of *Three Songs of Lenin* will be brought up.

Due to the good state of preservation, it is possible to reconstruct relatively plausibly what the 1934 version must have looked like. Fortunately, two editing lists exist for the sound version (1934), which, alongside brief descriptions of content, also contain lengths in metres and even a frame count. One of the documents, which can be dated to 1934, has been preserved in the Gosfil'mofond archive, and another editing list, dated 1935, is at the archive of the state film academy in Moscow (VGIK); they were neither prepared by Vertov nor by Svilova. Both lists match each other to a great degree, although the VGIK list contains descriptions that are more comprehensive than those in the GFF list. The comparison of the lists with the 1938 film print shows that the first two reels of *Three Songs of Lenin* remained unchanged, apart from a small number of interventions, which, however, were politically motivated. An example of this is the replacing of a photo of Lenin with one showing Lenin and Stalin together, which may be said with certainty not to have been inserted before 1938. In the film's third reel, Vertov removed a few shots which are present in the editing lists; several shots had shown Lenin at an appearance before delegates at a Comintern session, whereas in the 1938 film five intertitles follow each other in succession at this point. Observations such as these permit one to assume that the weight of visual presence was being systematically shifted from Lenin to Stalin. This is true not only for the images; the sound element was apparently also changed in this direction. When Vertov re-edited the film around 1937/1938, he removed from it a short speech by an oil shock worker (udarnik), who describes how 100,000 workers, like himself, joined the Party after Lenin's death. He goes on to relate how the bay, from which one million tons of crude oil were extracted annually, was ultimately renamed Il'ič 's Bay (after Vladimir Il'ič Lenin) at the instigation of the workers. At the same time, Vertov inserted a speech by Stalin, which was appended to the end of the film. The speech is one delivered at a meeting of voters of Moscow's Stalin electoral district on 11 December 1937. This Stalin constituency was established in about 1930 and under Nikita Chruščev was renamed the "First of May district" in 1961. Stalin was a candidate and automatically the deputy representing the Stalin constituency in the Supreme Soviet.[4]

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[4] My thanks to Sergei Kapterev for the explanation.

The fourth reel, showing the memorial service, was reworked more intensively. Here Vertov inserted Stalin at two points and removed Anatolij Lunačarskij (the People's Commissar for Education); Nadežda Krupskaja and Marija Ul'janova, Lenin's wife and his sister, were likewise excised from two points in the film. In the same reel, traces of a reworking with less political than rhetorical motivation can be seen. Vertov inserted four additional intertitles which advance and strengthen the film's function as an appeal. In the 1938 version, the titles that, according to the list, were already present in 1934 are followed by "Lenin", "does not move", "is silent", "the masses", "move", "the masses" and "are silent". This passage is present, incidentally, in complete form in *Kinopravda No. 21*. Perhaps a transcription error in the editing list is responsible, or perhaps *Kinopravda No. 21* was also the subject of re-editing in 1938, which would be plausible. In the fifth reel, before a significantly rapidly edited section in which a cannon is seen alternating with other shots, a group of six shots is missing. This, too, seems to have been motivated less by politics than by aesthetics.

The greatest interventions, however, were undertaken by Vertov in the sixth reel. Due to a 4-minute speech of Stalin's and the additional footage from the Spanish Civil War, he was forced to change his division from the original six reels to seven. In a number of cases, the film-maker inserted individual sections from the sound version into the silent version, such as, for example, footage of the Moscow-Karakum-Moscow car race, or views of the White Sea Canal, as well as images of the festive return of the crew of the ship Čeljuskin from its expedition to the North Pole. The Moscow-Karakum-Moscow race began on 6 July 1933 and was a major event in the Soviet Union, also being documented in the film *Moscow-Karakum-Moscow* (1933, Roman Karmen). Hicks contrasts the use of the "voice over" technique in Karmen's film with Vertov's approach (Hicks 2007: 86). The White Sea Canal was one of the large-scale Soviet projects, aimed at connecting the White Sea, via Lake Onega and Lake Ladoga, to St. Petersburg. After 2 years of construction work, the opening took place on 2 August 1933. The event was celebrated, also in a film of that year by Aleksandr Lemberg called *Baltic to White Sea Water Way* (1933). The Čeljuskin was a Soviet ship that had departed on an expedition to the Arctic Ocean on 10 August 1933. Soon after, it was trapped in pack ice, ultimately sinking on 13 February 1934. The crew, under Captain Voronin, and the leader of the scientific expedition, Otto Šmidt, as well as the passengers, were able to rescue themselves on an ice floe and were then flown to safety by the Soviet pilots Čkalov, Bajdukov and Beljakov. A festive reception was held in Moscow for the "Čeljuskincy" (the term for the Čeljuskin returnees).

Fig. 7.54 *Three Songs of Lenin* (sound 1938/1970): neon sign with Stalin present
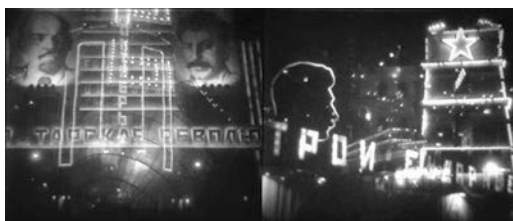
Fig. 7.55 *Three Songs of Lenin* (sound 1938): shots possibly already present in 1934

Some shots vanished from the film completely; thus, for example, an intertitle and a content description in the editing list mention a political department (politdel) and its not further identified head. The head of this political department was Lev Trockij, as it was subordinated to the Red Army. It is, then, conceivable that the removal of this scene has a political background. In addition, there are shots of a certain Comrade Vasil'ev, who cannot be more definitely identified, and his daughter, Karina, as well as an airplane named after Maksim Gor'kij. It is possible that Karina is the child who was born during the voyage of the Čeljuskin.

Stalin was already present in some shots of the film in 1934, which is also explicitly mentioned in the editing lists. It is certain that Vertov supplemented this material with additional images in 1937/1938, which, however, cannot be established for individual cases based on the descriptions of content. Such images show, for example, neon signs with Stalin's profile, a train bearing the inscription "Iosif Stalin" or Stalin in the company of his comrades at the Kremlin wall (Fig. 7.54 and Fig. 7.55).

In the film of 1938, too, Vertov's depiction of Stalin and Lenin by no means accords them an equal status; the former is not given more prominence through the use of any formal editing procedures or pictorial composition. We see Stalin in short shots, standing, walking and waving, as well as during a speech, where he is still not the sole protagonist but surrounded by other members of the government. The Stalin material remains strangely loose within the film's structure, i.e. Vertov did not weave it into the film's organic structure, as he always did with Lenin. In *Three Songs of Lenin*, then, Stalin is under no circumstances presented as a new leader who could replace Lenin. MacKay also shares this observation:

> In truth, this is unsurprising, for Stalin in Three Songs neither "replaces" Lenin nor comes to occupy the pole of the "New" (as opposed to Lenin's "Old"). Inasmuch as Stalin is shown "continuing the work" of Lenin, he is like everyone else in the film; inasmuch as he "fulfills" Lenin's directives, he remains decidedly secondary to the primary model (and the original film, I should add, apparently contained no folksong references to Stalin, though it certainly could have included them). (MacKay 2006: 386)

As MacKay adds in a footnote to the text, Vertov inserted the following quote from *Pravda* of 22 April 1927 into his working notes: "In the stories, songs and tales of the peoples of the East, Lenin is characterized as a bogatyr' [folkloric prince]

who has expanded into a hero for all humanity and raised a holy war against the rich, the violent, the insulters, and defeats them in his role as 'scourge of the land.' No one can stand up to his power. On the other hand, he is a simple and good father" (ibid.: 391).

In his film, Vertov had fundamentally tailored and conceived both image and sound with Lenin in mind; it was, however, now required that he add more "Stalin material" to the film, which in practical terms, too, was not that simple. It was, after all, a sound film that was being reworked, and it was necessary to ensure that the synchronisation of image and sound would not be impaired by the additional material. The sound quality also suffered greatly through this procedure, which was a decisive reason to record the sound anew in 1970. The additional footage, such as Stalin's speech, is therefore to be found at the end of the film or at the ends of reels, which is evidence that Vertov and his team sought methods to make the alterations that were simple to implement, as a reworking which includes making additions to the existing structure of an elaborately designed whole is always a difficult task for a director.

Vertov also undertook a reworking of the silent version of the film in 1938. This may be understood with the aid of an editing list which contains not only the intertitles but partial details regarding the content of the shots. A perusal, however, shows that most of the film remained as Vertov had planned it in 1935. For the most part, it was only individual shots that were removed, though the reason for these changes is not always clear, as no obvious political explanation for them is known. Thus, for example, a shot at the beginning of the film, showing a Browning revolver, even with a bullet, as the editing list specifies, no longer survives. Apart from this, there is no longer any material in the subsequent reels showing Gor'kij in the midst of a crowd and the "short scenes of Dneprostroj and Belik and other wearers of orders" have vanished. Apparently Gor'kij was systematically removed from both versions of *Three Songs of Lenin*. Perhaps this had to do with the altered appearance of the writer, who died in 1936. Rumours of murder circulated regarding his death; Genrich Jagoda was ultimately charged with it during the third Moscow show trial (1938).[5]

But Vertov did not only remove material from the film, he also added some, in particular current events from the late 1930s at the end of the film. The footage of the completed Moscow-Volga Canal was certainly not edited into the silent version of *Three Songs of Lenin* before 1938, because construction began in 1933 and the canal was opened on 15 July 1937. The Spanish freedom fighter Dolores Ibárruri (also known as "La Pasionaria"), as well as images of the Spanish Civil War and workers' parades from all over the world, was also only added in 1938. The rescue and celebrations of the return of the Čeljuskin's crew were also centrally featured; this material may even have originated in Vertov's sound version, as it no longer exists there. It is not clear why Vertov transferred precisely these topical events to the silent film. Perhaps the director exploited the film medium as a kind of visual information service for the provinces, for which the silent version was intended,

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[5] My thanks to Eva Binder for the information.

Fig. 7.56 *Three Songs of Lenin* (silent 1938): shots were added in 1938

Fig. 7.57 *Three Songs of Lenin* (sound 1938): editing list with deletions

whereas it may be assumed that these incidents were already familiar to the majority of the population in the cities, where the sound version was screened.

Sometimes Vertov may be assumed to have made additions on aesthetic grounds, as, for example, when he split a long intertitle in two for the 1938 version, editing in a group of short shots between them. With this formal artistic device he further strengthens the message of the intertitle: "and if you have great sorrow, come to this hut and look at Lenin, and your grief will recede, like water" (Fig. 7.56). The title is split into "and if you have great sorrow" and "come to this hut and look at Lenin, and your grief will recede, like water".

Three Songs of Lenin was reconstructed in the Soviet Union in 1970 to great media response, as can be gathered from the Russian press and further attested to by a publication released just for the occasion. The sound version of the film was presumably already de-Stalinised in the 1950s, leaving only the silent version in the form it had been produced by Vertov in 1938. A systematic comparison of the two preserved prints of the sound version (1938 and 1970) shows that in 1970 there was no re-editing other than the removal of scenes that either show Stalin directly or are linked to him. An editing list assumed to date from 1938[6] contains indications of the

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[6] Archival document with signature V 108, held in the Collection Dziga Vertov at the Austrian Film Museum

approach to the task at the time. This is a complete editing list of the sound version, in which short descriptions of the shots and their lengths in frames and metres have been entered next to the titles. Handwritten alterations may be clearly discerned; for example, in entry number 18, the title "Here is the bench which we know from photographs", with its description of the shot, "In the photo Comrades Lenin and Stalin sit on the bench", is crossed out. This bench in the garden of the Gor'kij estate, Lenin's last residence, appears later in *The Vow* (1946, Michail Čiaureli). In the film *Three Songs of Lenin*, which appeared 12 years earlier, Vertov had created a kind of iconography of this everyday object that can scarcely still be grasped today. For Bulgakowa (2003: 55), such an approach is, among other things, a constituting feature of socialist realism.

Further shots removed from the film in 1970 were marked in a similar manner. This editing list can serve as evidence for the planned production of a de-Stalinised version of the film (Fig. 7.57).

It is not possible to say with certainty who was behind these deletions. Perhaps Svilova was a party to the work, as the list came to the Vertov collection in the Austrian Film Museum from her archive. The "cannon" episode, notable for its formal design, is – as the title already says – constructed around the recurring motif of a cannon, which is shown in very short shots (Fig. 7.58).

As this example illustrates, in 1934, in *Three Songs of Lenin*, Vertov was still giving himself the latitude to apply avant-garde methods to political subjects. In this film he remained relatively vague as regards the portrayal of Stalin, although by this point in time the latter had already established himself as the Soviet Union's new strongman and had demonstrated his power from the mid-1930s on in show trials and the ruthless persecution of political rivals. The filmic portrait of such a dangerous and increasingly unpredictable dictator was therefore for Vertov already a risky proposition during *Three Songs of Lenin*. He nonetheless eschewed the portrayal of Stalin or Lenin by actors and continued to use the available documentary material, as he had done hitherto. Vertov's decision in favour of the documentary film is perhaps also the only thing that approaches the subversive in this film, although it owes more to the director's basic attitude than to potential political resistance. If, however, only archival footage was used, then there was scarcely any artistic scope for the portrayal of Stalin's personality, and it could thus only be fictionalised by means of narrative structure and editing.

Vertov's last feature-length film, *Lullaby*, became, by contrast, a hymn to a warm and down to earth Stalin. For here, in terms of both content and form, Vertov largely refrained from displaying any adventurousness, the beaming leader at most being combined in parallel editing with, for example, speakers or parachutists (both
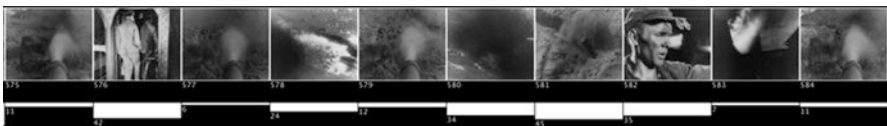
Fig. 7.58 *Three Songs of Lenin* (sound 1938/1970): the "cannon" episode with shot lengths

female). The first third of the film is devoted to building up a sense of excitement. Women from all parts of the Soviet Union walk, climb, ride and drive in the most varied modes of transport to their leader in Moscow. At this point, Stalin is not in the picture at all, appearing only after a long introduction. MacKay describes the beginning of the film as a typical Vertov opening: "Beginning with the standard Vertovian passage from the backwards and moribund Old to the lively and diverse New (again, as in Three Songs, using footage from Central Asia and the Transcaucasus), Lullaby figuratively represents the achievement of socialism as a vast movement of masses of women in a Stalin-ward direction (toward the Kremlin)" (MacKay 2007: 4).

The emphasis, at least as far as Stalin is concerned, is on the content of shots, less on the formal design. One may assume that the unedited footage available was also already very static and filmed without much variation in shot size. Why should the cinematographers take any risks, especially as Stalin was known for his vanity? Apart from that, by this point Vertov had, in any case, hardly any remaining influence on the camerawork.

The distanced and serious Stalin of *Three Songs of Lenin* now undergoes a filmic humanisation and is built up in *Lullaby* into a positive figure similar to Lenin, who no longer appears in this film at all (Hicks 2007: 114). The dictator ultimately lets the women who have been trustingly approaching him over the course of the film come close to him, embraces them and touches them tenderly. In the graph in Fig. 7.59, each shot is represented by its first frame. A demarcation of *Lullaby* into clear episodes is possible only to a limited degree.

Vertov arranged archive material of major events in large thematic blocks, which are now and then interrupted by other film documents. More interesting is the question of how long the individual shots are in which Stalin may be uninterruptedly seen, as these shot lengths help clarify at least two general characteristics of Vertov's procedure in this film: firstly, that the director prioritised content over formal design and, secondly, as a consequence, all the shots showing Stalin are on average longer than those in Vertov's work up to that point. Hicks points out that Stalin is over-

Fig. 7.59 *Lullaby* (end of the film): individual shots with Stalin
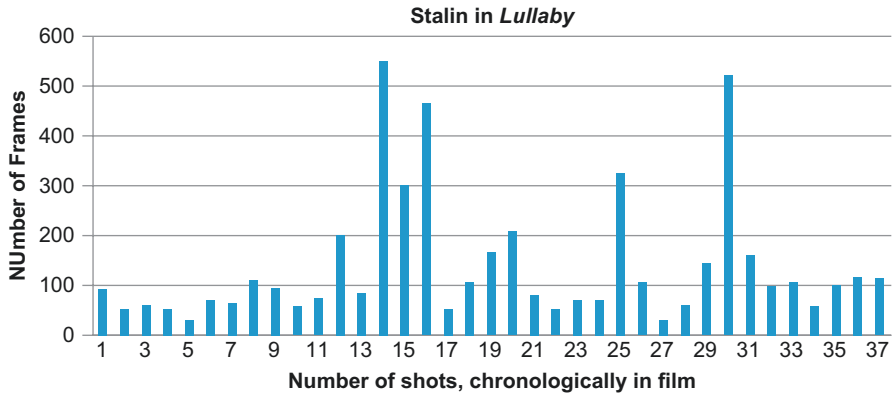
Fig. 7.60 *Lullaby*: all shots with Stalin collected together and arranged according to the order of their appearance in the film
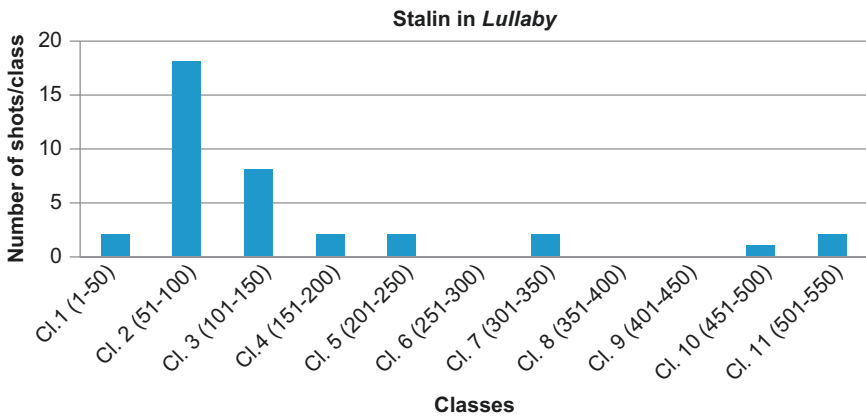
Fig. 7.61 *Lullaby*: shots with Stalin (distribution in classes according to shot lengths)

whelmingly filmed from above. He sees in this a procedure on Vertov's part aimed at rendering the dictator more human. As a still more convincing example, Hicks describes a close-up in which Stalin's pockmarks are visible. Stalin is uninterruptedly present in 37 of the film's shots, for the most part embedded in larger thematic contexts. In addition there are about five further shots that are inserted as highlights at the end of the film and are not taken into consideration here. The relevant shot lengths are depicted in chronological order in the graph in Fig. 7.60.

At present, no pattern can be perceived in the design of the Stalin shots over the course of the film. Knowledge of the political circumstances could tempt one to assume that the shots that show him grow progressively longer, giving Stalin increasingly more of a presence in the film. Such a proposition, however, does not hold water. More conclusive is a statistic depiction of the distribution of absolute shot lengths, as in Fig. 7.61.

Fig. 7.62 *Lullaby*: the "entry into the hall" sequence

Fig. 7.63 *Lullaby*: the "Stalin and zeppelin" sequence

Fig. 7.64 *Lullaby*: the "girl's speech" sequence
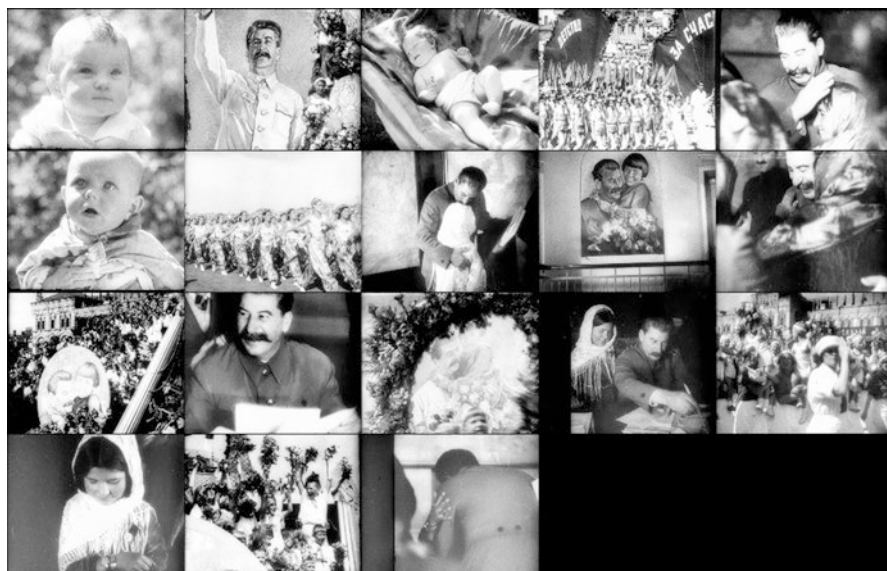
Fig. 7.65 *Lullaby*: the "affectionate leader" sequence
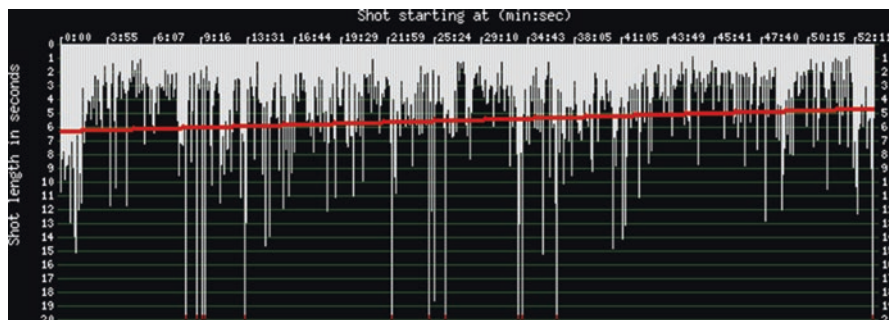
Fig. 7.66 *Lullaby*: shot lengths

This diagram shows that half of all shots are between 51 and 100 frames long, followed by 8 shots with a length of up to 150 frames. This pattern is in clear opposition to the way in which Vertov had hitherto edited films.

Although in *Lullaby* there are no longer episodes which can be demarcated in the Vertovian sense, a number of sections in which Stalin is incorporated in parallel editing ought nonetheless to be described and visualised (Figs. 7.62, 7.63, 7.64, and 7.65).

In the following, these sections which belong together thematically will be referred to, for the sake of simplicity, as sequences. This will assist in obtaining an impression of how Vertov placed Stalin with direct reference to other material. In principle, the sequences are spread over several minutes, the shots follow the protagonists for a protracted period, although very little happens. For the most part, those sharing the image with Stalin are static speakers and applauding female audience members, whom he, in turn, smiles at, congratulates and hugs.

In the last 10 minutes of the film, only more individual, rather loosely spread, shots with Stalin appear. Some of these had already been present in *Three Songs of Lenin* (1938), for example, a shot of Stalin standing atop the mausoleum and waving to a parade. Vertov depicts Stalin in the film without ambiguity, giving him a generous share of filmic presence and an extremely positive connotation. As far as the formal aspect goes, it should be noted that for Vertov's standards, the film fades away very quietly, without the customary furious finale in which the pace increases and important images from the film are recalled to the audience by being repeated once more in rapid editing. *Three Songs of Lenin* could already be considered an exception, but in the case of this film, it is precisely the finale which was reworked, making a statement about this aspect impossible.

Lullaby, however, cannot be discussed without considering the artistic participation of Elizaveta Svilova. The couple's transfer to Sojuzkinochronika was an important turning point for Vertov's closest collaborator; not only was she named as co-director, but she also began her independent career as a film-maker. After *Lullaby* and up to 1956 (3 years after Vertov's death), Svilova participated in over 100 further documentary films and newsreel editions (Penfold 2013: 292). Although we

may assume that the collaboration between Vertov and his wife was always a close one, conducted with mutual respect, there are indications that from *Three Songs of Lenin* on, Svilova's contribution became more visible. The film scholar Christopher Penfold, in his comprehensive dissertation on Svilova's work, sees a clear creative evolution, also manifesting itself in the choice of subjects: "Female subjects were also the cornerstones of their following two films, *Lullaby* and *Three Heroines* (the latter for which Svilova received a co-director credit), where themes of motherhood and heroism respectively can be traced back as the roots of ideas and motivations that were to feature continually in Svilova's independent career" (ibid.: 52).

Let us look once more at the whole film, this time in the customary breakdown of its shot lengths. This measurement was carried out by the author only after the end of the project, with the help of FACT on Cinemetrics (Fig. 7.66).

The film consists of 593 shots, the median shot length is 5.5 seconds. If we recall the number of shots in Vertov's earlier films, we realise that *Lullaby* is at the low end of the spectrum; to put it more precisely, it is the feature-length film with the second-lowest count of shots per minute.

Film	Number of shots	Run time(min)	Average shots/min
Kino-Eye	1.304	78	17
Kinopravda No. 21	413	32	13
Stride, Soviet!	1.108	72	15
Sixth Part of the World	1.017	74	14
The Eleventh Year	660	50	13
Man with a Movie Camera	1.782	76	23
Enthusiasm	604	68	9
Three Songs of Lenin	817	62	13
Lullaby	593	58	10

Formal processes are used very sparingly in *Lullaby*; in the entire film, there are only three travelling shots and one dissolve, which, however, does not accentuate any significant moment and gives the impression of being rather random. Nor can any pattern in the arrangement of shot lengths be perceived at first glance. This visualisation confirms the impression obtained by viewing the film: we are here dealing not with rational and visually impressive editing but with a film cut to a different intention, towards an emotional, affective effect. Vertov and Svilova already proceed in similar fashion in *Three Songs of Lenin*, but in the film produced 3 years earlier, one may still find remnants of the episodes typical of Vertov. Penfold argues that Svilova's films fundamentally place the relationship between the filmic text and the audience in the foreground: "Her films respected the audience, at least to the extent of understanding the need for a two-way interactive process. Audiences were expected to react, not to receive the images inertly but to make changes to their lives and outlook" (ibid.: 53).

It is thus about the emotional effect, which is to be achieved only visually, through the arrangement and juxtaposition of the images, and not through an explanatory commentary (ibid.: 62). By addressing the feelings of the spectators, the ideas and principles of the Communist Party can be optimally transmitted. Penfold elaborates that in her choice of rhetorical figures and procedures, Svilova was falling back on classic Soviet montage: "She draws on established yet relatively simple visual symbols familiar to the Soviet masses and organises them according to the cerebral modes of shot juxtaposition – namely techniques of dialecticism, linkage and realism – attributed to the Soviet montage school of the 1920s" (ibid.: 66).

Seen from a different vantage point, Svilova's method corresponds to a concept that Walter Murch formulated much later, but which has perhaps always been used by editors. For him, the ideal cut unifies six criteria, arranged in order of importance: "Emotion (51 %), Story (23 %), Rhythm (10 %), Eye-trace (7 %), Two-dimensional plane of screen (5 %), Three-dimensional space of action (4 %)" (Murch 2001: 18). The feeling, according to Murch, must always be preserved.

Even if, in his analysis, Penfold refers mainly to the films made after the end of Svilova's collaboration with Vertov (such as the films about the Nuremberg trials), to which his observations more precisely match, I think that the main features have already been put in place in *Lullaby*, that is, consistently further developed from *Three Songs of Lenin*. Stalin and the Soviet people who worship him are overwhelmingly alternated in the editing – we can thus directly perceive the effect that emanates to the people from his character (whether in person or in visual effigy). Stalin reacts with a show of applause, with a smile, with words of acknowledgement or even with an embrace. Emotion is palpably transmitted on the screen and the later opposition of "we/them" in the films about the war crimes trial in Nuremberg is here a unifying "we/him". For this type of communication, complex editing is no longer necessary; it is probably even a hindrance.

Whether these decisions can primarily be ascribed to Svilova's growing influence or not is a moot point, as one can only speculate on it. For too little is known about the actual degree of Svilova's participation in Vertov's films. One can also only speculate on whether the work methods of both underwent gradual change after 1930, possibly under the pressure of the political circumstances. What is certainly clear is that a style of editing geared to the emotions was far more in tune with the dogma of social realism, demanding, as it did, an unambiguous, positive and popular imprinting on works of art. Stalin as a romantic hero in the midst of female parachutists is, accordingly, a typical motif of the time.

Vertov Between Avant-Garde and Social Realism

Vertov's artistic development in terms of form and content between 1924 and 1937 must also be seen against the background of the avant-garde's replacement by social realism. It has rightly been pointed out that Vertov's most active and productive creative period was contemporaneous with a politically very eventful time (MacKay 2006, Listov 2000). The fusion of artistic practice and political exertion of influence in this may be seen as a constant. After a few words dealing with the Russian avant-garde, I would like to arrive at the transition to social realism and generally follow the analyses of Boris Groys and Vladimir Paperny. Subsequently I shall further summarise the design of *Three Songs of Lenin* and *Lullaby* as regards Lenin and Stalin.

In his analysis of the avant-garde, Peter Bürger argues that with it the social sub-system of art entered the stage of self-criticism. Criticism was now no longer interested merely in the individual directions of art but in art as an institution, as it had evolved in bourgeois society (Bürger 1974: 28). Art as an institution thus includes both the apparatus that produces and distributes art, as well as the ideas of art that have been handed down. The avant-garde turned against both areas, against the apparatus of distribution just as much as against the autonomous status of art in bourgeois society, for the avant-garde protest wants to lead art back into real life. The materialistic artists saw themselves as spiritual workers in the social process of production, within which they wished to reflect and analyse reality with their art. The exponents of Russian Formalism and the Proletkul't movement, among whom Boris Arvatov, Sergej Tret'jakov and Sergei Eisenstein were active, did not differentiate between the aesthetic and political engagement of artists and intellectuals. They attempted, rather, to deploy the new media experimentally, in order to lend socialist art a certain authenticity and to reach social revolutionary efficiency in a reception aesthetic respect. Editing, for example, served them as an instrument in order to discontinue the "polished surface" of conventional artistic enjoyment, instead destroying it in the dialectic combination of fiction with reality.

Authors like Tret'jakov, Bertolt Brecht and Walter Benjamin were linked, inter alia, by a great interest in the cinema and its possibilities. In the essay "Our Cinema", in 1928, Tret'jakov describes the tasks and the new type of the active spectator who does not want to see more psychological costume dramas on the screen, preferring, on the contrary, the class struggle and the "dialectic of emotions". Tret'jakov separated the "film chronicle", a collective term for newsreels and ethnographic films, from the agitational film; for him the chronicle could be compared to the work of a scientist, whereas the agitational film appeals to the intellect and the emotions, in other words, also controlling the sympathies and antipathies of the recipients (Tretjakov 1972 [1928]: 62).

The film was understood as a tool for the generation of emotions, but this was not to be done via empathy, but through partisanship, for the public should be "processed" and take something with it which continues its effect after leaving the cinema auditorium. The viewers should in this way be formally charged with

excitement, as Eisenstein similarly demanded with his concept of the "montage of attractions" and implemented with his revolutionary films. In his investigation of montage as the possibility of a subversive, socially critical process, the film scholar Bernd Kiefer points to Eisenstein's film theory as pervaded by the problematics of how it is possible to depict dynamised processes in their discontinuity and inconsistency: "Montage in Eisenstein's sense gives form to the historical and social contradictions, the dialectic logic of history and society; it transforms an ideological conception into rapid images and places trust in a constructible sense of history; montage demystifies by making the underlying structure of reality recognisable through dialectic logic" (Kiefer 1993: 232). As Kiefer explains, Eisenstein reproaches his fellow director Griffith, saying that his montage is "a school of speed and not of rhythm" and thus bemoans "the lack of intellectual penetration of the social contradictions that account for the rhythm of the time" (ibid.).

For Tret'jakov it is about a fundamental redefinition: "Both the material and the form must be subordinated to the film's social goal" (Tretjakov 1972 [1928]: 62). Brecht had formulated it in similar terms for the epic theatre and had tried to realise these thoughts practically in his own epic theatre. Benjamin, too, indirectly called for a meaningful advancement in film editing, which for him would have represented a significant step towards the technically innovative production of art. The criticism of the conventional means of depiction was seen by the left-wing theoreticians as a conscious demarcation from capitalist society and its customary artistic practice. These were condemned as hypnotically soporific and as pure "easily digestible cud", whereas the agitation film "puts guns in our hands, so that we can shoot these words and actions at the appropriate side" (ibid.: 64). Tret'jakov also wrote about Vertov's films and in 1928 had some advice to give the director:

> In Dziga Vertov's last works such a shift from the specific to the schematic has made itself felt; the blame for it may be ascribed to the excessive pressure of the market. The return to this specific, the development of the methods of its depiction is now the next publicistic and technical task of the kinoks. The learning to view our reality simply from eye to eye, without it being compelled, standing on emotional tiptoes – that is a difficult but fruitful chore." (Ibid.: 67)

The LEF group – consisting, among others, of writers, avant-gardists, futurists and constructivists, Proletkul't members and theoreticians – therefore attempted to develop and establish an alternative concept to traditional art, the methods of artistic production and a literature of facts (literatura fakta). In 1929 the eponymous anthology appeared, consisting, to a large extent, of articles from the periodical *Novjy Lef* (Flaker 1989: 338). Artistic production is understood as the replacement of auratic, isolated works of art with useful things, the beauty of which lies in their usefulness to socialist development (Tretjakov 1972: 205).

Despite the high aspiration towards artists actually rebuilding the world, LEF had no administrative power over real social conditions and therefore concentrated on agitation and propaganda (Groys 1996: 34). The artists initially engaged in the design of agitation art works of all kinds, such as Majakovskij and his famous ROSTA windows. ROSTA (the acronym of the Russian Telegraph Agency), founded in 1918, had Russian avant-garde artists design hand-made posters which were then

publicly exhibited in display windows. The aim of literatura fakta was not the liquidation of the literary heritage, but the creation of new from the old, with the canonical works available as an arsenal of material and forms on which to draw. It was thus permissible to learn from the old, although only for the purposes of reworking. In the application of production art to literature and film, Tret'jakov was a leading light, also working closely in this regard with Šklovskij and Tynjanov, publishing in the periodical *Novyj Lef* (The new left front of the arts).

The resurgence of art brought about by the first Five-Year Plan subsequently threw the avant-garde into a deep crisis, as exemplified by the collapse of LEF in 1928 (Flaker 1989: 338). Finally, on the 23rd of April 1932, all artists' associations were dissolved, and the transition to social realism was introduced (Groys 1996: 39). Whereas the avant-garde aimed not only to depict the world, but to transform it, and was oriented towards the future, the art of social realism now had to be comprehensible to the masses' its subjects presented in a way that strengthened national feeling in as problem-free a manner as possible. Other than in comedies, heroes now lost their eccentricity, and, as the subject of nation-building moved into the foreground, film epics began to feature the characters of Lenin and Stalin as central heroes (Margolit 1999: 71).

In his fascinating analysis *Gesamtkunstwerk Stalin*, the cultural scholar Boris Groys exposes several myths related to the depiction of the Russian avant-garde, in the process taking a clear swipe at reception in the West (Wolfe 2013: 102). Although he concedes that the art of the avant-garde was deservedly admired for its bold radicalism, he simultaneously determines that it has not yet been sufficiently researched. Many of the avant-garde works have been either destroyed or forgotten since the beginning of the 1930s. By contrast, social realism is "usually depicted exclusively as a reign of terror by censorship, which wished only to persecute and destroy" (Groys 1996: 9). He writes: "In this perspective, the Stalin era becomes a pure spectacle of martyrdom, a history of the persecutions, which it doubtless also was. The question is only: persecuted in whose name and which type of art was canonised for what reasons" (ibid.).

Groys notes that at the time his book was published, in the early 1990s, the art of Stalin's time had become tabooed to the same extent as the avant-garde. Even if his assessment is, in the meantime, no longer up-to-date, the author nonetheless describes the climate of a time which is important for a discussion of the interventions made in Vertov's work and the reception of his later films. It was not without reason that *Lullaby* was hardly shown, not to mention the later films. It was not only Vertov's films that were reworked; the traces of Stalin were to be obliterated across the board and the mighty social realism to be "disempowered", and in the process many a work of art was even destroyed completely.

It is precisely the conventional imputation that the avant-garde willingly cast itself in the role of the outsider and did not seek political power that, according to Groys, needs to be reconsidered, for: "Quite to the contrary, anyone who attentively follows their texts and practice determines: it is precisely in the art of the avant-garde with its artistic will to control the material and its organisation according to

laws dictated by the artist that a direct connection to the desire for power manifests itself, which also led to conflict between artists and society" (ibid.: 11).

He goes on to explain that social realism was not created by the masses for whom it was to be comprehensible, but rather by the "highly educated and well-versed elites, who had gone through the experience of the avant-garde" (ibid.: 13). This is still more remarkable when we recall the dogmas to which artists had to adhere from the 1930s on. This development, says Groys, is already logically inherent in the foundations of the avant-garde.

> The avant-garde artist believed that the knowledge of the murder of God, that is, his complicity in it, gave him a demiurgic, magical power over the world; he was convinced that this going-beyond-the-boundaries-of-the-world permitted him to discover the laws that govern the cosmic and social powers; he was willing to use these powers as if he were an engineer, to halt the dissolution of the world, to give it, by means of artistic technique, an eternal and ideal form, but one that accorded to the respective historical moment, and thus to create both himself and the world anew. (Ibid.: 72)

We should not, then, permit ourselves to be misled by the familiar formulations of the avant-garde, the emphasis on the technical, rationality and materiality, for, according to Groys, sacral practices are clearly at work, and they were transferred to social realism and there further developed (ibid.). The later exorbitant Stalin cult, too, already has its roots in the avant-garde period. Thus, for example, Majakovskij, one of the figureheads of avant-garde art, declared the dead Lenin to be more alive than all the living (ibid.: 74) – a formulation that could also have been the subtitle for Vertov's *Three Songs of Lenin* (Kanzog 2000). Lenin's spirit lived on not only in his achievements but had passed into Stalin, as is clearly expressed in the formula "Stalin is the Lenin of our day" (Groys 1996: 76). This is the point at which to recall Ryklin's description that designated Stalin as a high priest and the Russian biocosmists, who were in contact with the avant-gardists and dreamed in utterly concrete terms of human immortality.

Groys posits that the Stalin era simply cannot be understood without the famous slogan "Life is easier, comrades; life is gayer". The gayness here stems not, as one might think, from any practical easing in the material conditions of life in the Soviet Union, "but from the insight, that that is not what it's about at all" (ibid.: 67). In social realism, too, the dreamed-of, or, rather, approaching reality of a better, "merrier life" remained a central element of art; among the popular films that come to mind in this vein are those of Grigorij Aleksandrov, *Jazz Comedy* (1934, Grigorij Aleksandrov), or *The Radiant Path* (1940), the title of which described the agenda. The musical genre exemplified by the "kolkhoz comedies" (of which Ivan Py'rev was the main exponent) can also be interpreted as a reaction against the harshness and cold, the "emptiness of the heart" represented by the formalism of the avant-garde. To replace its soullessness, feeling makes a comeback and heroes arise who can "paralyse the enemy with the sheer power of their gaze" (ibid.).

For Groys, the culture as although he complained of the Stalin era remains oriented towards the future just as that of the avant-garde was and is therefore not regressive but projective. The cultural scholar Vladimir Paperny describes the culture of the Stalin era (which he terms "Culture Two") as a vision which could never

be attained: "In Culture Two, the future was postponed indefinitely. The future became even more beautiful and desirable, and the movement forward was even more joyous, but there did not seem to be an end in sight to that movement – the movement had become an end in itself" (Paperny 2002: 15).

In all these lines of tradition and commonalities, the question then arises as to where the difference between avant-garde and social realism actually lies. For Groys, it can be grouped with the following questions: "the relationship to the classical heritage, the role of reflection and the problem of the new man" (ibid.: 44). All these differences, however, arise from the radicalisation of the avant-gardists, not to their being rejected.

Was, then, Vertov's development as a film-maker, from form to feeling, from pure taking-in to pathos, a consistent one? To what extent could one describe Vertov as a social realist film-maker, if one had a mind to do so? And if that were the case, why was he still unable to realise any more projects? We may start with Vertov's own testimony about himself, inasmuch as it has come down to us. No general political or even critical expressions are to be found there, which is not surprising. The story goes that his widow also contributed to this. Years after Vertov's death, she mentioned to a colleague that "some of her husband's diary entries [had] seemed to her to be dangerous. She therefore went through the diaries with a pair of scissors" (Listov 2000: 192). Even if it is no longer possible to verify whether this story is true, it is a fact that things were indeed cut out of several notebooks (ibid.). It is known that Vertov was not a Party member but wrote in the questionnaire for the review of employees of Soviet facilities: "No party affiliation. I sympathise with the anarcho-individualists" (Tode, Gramatke 2000: 205).

The remaining entries paint a portrait of a man whose struggles are more against bureaucracy than against the Party. In his speeches, he makes his professions about Lenin and communism, while in his diary he complains about obstacles during filming, poor equipment and the lack of planning capability for his work (Tode, Gramatke 2000: 22). To these are added difficulties in concentration and external distractions. In 1934 we find the following words, which testify to his inner conflict: "I don't want orders 'from... up to'… I want to write poetry, to play the violin, to solve a math problem...The third 'I' joins the argument: Enough discussion! I, the conqueror of nature, the conqueror of desires, of chaos, throw the switch: heart, beat more evenly, brain cells, dress ranks! Forward, to work, in a united front! Quickstep!" (Vertov 1984 [1936]: 173)

A few lines further on, we find the following entry: "Do, not what you want, but what needs to be done. You must want what is needed" (ibid.). And this wanting should result in a Five-Year Plan, as he writes. This remark has a somewhat scornful ring to it, for although he complained about the bad organisation, he was, on the other hand, fearful of the increasing bureaucratisation.

In summary, the analysis and visualisation of the two films *Three Songs of Lenin* and *Lullaby* enable one to read a clear difference in the artistic treatment of Lenin and Stalin. If one knows Vertov's prior work, the formal design of *Lullaby* remains uninspiring in a technical sense and overall not very innovative. It is worth mentioning at this point that approximately one-fifth of the film consists of footage of the
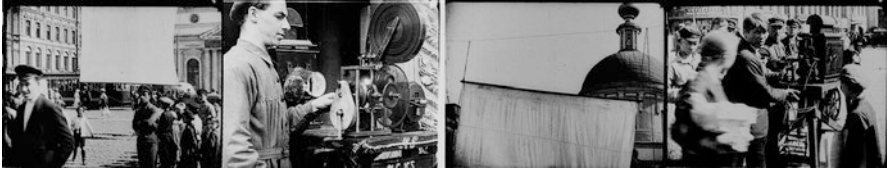
Fig. 7.67 *Kinopravda No. 9*: film screening on the street

Spanish Civil War, which has been put together with no reason that suggests itself at first glance – either on the technical level of editing or on the narrative level. What lay behind it, whether the director really did not want to distinguish Stalin with experimental editing for subversive reasons, or through fear of repression and persecution, is not something that can be derived directly from the film itself. To this must be added the punitive persecution of formalisms as the new guiding line in the Soviet cinema. At a gathering in 1949, Vertov confessed to "errors of Formalism" which he had at the time not yet understood. In so doing, he took all the blame upon himself and expressed his hope that he would be assisted in his future work to do everything correctly (Vertov 2008b [1949]: 378).

As I wished to show in my analysis of the late films *Three Songs of Lenin* and *Lullaby*, there is no doubt that one can determine formal changes in comparison to earlier work: the shots become longer, the cutting rhythm more even, and the editing shifts towards an emphasis on feeling and loses the rational. In the early films, the desire to change the world and to instruct the people, which Vertov wished at least actively to support through filmic means, is palpable. His manifestos make it clear that Vertov, in an avant-garde manner, radically rejected the old arts, if not the totality of art itself and wanted creatively to intervene in life. The collective reception is placed in the foreground; in *Man with a Movie Camera* and *Kinopravda No. 9* (1922, Dziga Vertov) the film going public in the cinema auditorium and on the street is prominently given centre stage (Fig. 7.67). For Peter Bürger this is an unambiguous characteristic of the avant-garde.

In the middle of the 1930s, the avant-garde portrayal of the personalities of the leaders still functioned; Vertov, for example, could separate sound documents from the image level, without their synchronicity being necessary. A different regime of portrayal finally took over films in the Soviet Union with the new cultural dogma of social realism; illusion and fiction replaced documentary, authentic images, the effect of which was significantly more difficult to control. This also explains Stalin's preference for the feature film, in which he was no longer present in person, but had himself portrayed by selected actors.

Overall one could say that Vertov's sympathy was in principle with people. This emerges both from his diary entries and from his films. Even when Vertov integrates faces in close-up, thus, so to speak, charging them with Soviet energy, the fascination with the people next door remains palpable. The avant-garde label must, at least for late Vertov, be questioned. But even the early Vertov, when precisely observed, by no means loses himself in formal gimmicks, although his critics loved to claim

that he did and have not yet ceased to do so. The description from Groys, "The avant-garde artist, who has put himself in God's place, transcends the world he is to create, he somehow does not belong to it, has no place in it, for man has vanished from the art of the avant-garde" (Groys 1996: 64), applies, perhaps, to the harsh words in Vertov's manifestos; in his films, however, he speaks a different language.

Vertov's equivalent demand for truth, the "right" life, stands, then, more in opposition to the avant-garde than to the understanding of art in the Stalin era. Vertov, however, attempted not only to show this truth in an illustration of reality but first to use formal means to extract it, in other words to create it. In so doing, he remains simultaneously too close to the actual reality, and too far from the one desired, to be attributed to either social realism or the avant-garde.

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Chapter 8
Summary and Outlook

> Kinechestvo is the art of organizing the necessary movements of objects in space as a rhythmical artistic whole, in harmony with the properties of the material and the internal rhythm of each subject. (Vertov 1984 [1922]: 9)

This book suggests a method for film analysis which initially emanates from the preserved film prints. The investigation of the materials, which thus constitutes the starting point, is presumably also of interest to other researchers. This focus on the material ensures not only the comprehensibility and, ideally, the quality of the empirical data; the film print itself, as source material for the investigation, should thus take its rightful important place. As I have already explained elsewhere, this is an area in which catching up is necessary. It cannot be pointed out often enough that it is essential, for the presentation of the results of research in film scholarship – and even more so for problematic questions of film history – to know precisely which material it is that is being researched. This holds true no less for DVD editions, even though one must concede that it is frequently no simple matter to find out the provenance of the original analogue material.

But not only filmic sources were used in my work. Many documents are available in the Vertov Collection at the Austrian Film Museum and can be inspected in an online database. Naturally, such a case may be seen as a stroke of luck and the most has been made of it. The available material I could consult for analysis of the reception of Vertov's films included historical press articles. This enables one to conduct a reception analysis, even if not of the public itself, but at least on the basis of film reviews. Rather than providing comprehensive information as to content, these describe and discuss the direct impressions, with constructive criticism and exuberant enthusiasm found side by side in most cases. In this way, one can recognise and trace the discourses of public, cultural and political life in the film works.

My approach, in terms of film scholarship, was one inspired by Russian Formalism, which not only serves as a methodological basis but also provides, in an academic historical sense, the context necessary for an understanding of the environment in which Vertov lived and worked. Even if the adoption or adaptation of

concepts from Formalism is quite problematic, the perusal of its writings and the concentration on the form they propagate is today, once more, stimulating. The establishment of new trends, such as digital humanities, is shifting the construction of texts and their (computer-aided) analysis once more into the foreground. As the study of historical Formalism shows, interdisciplinarity is not a new invention. It is precisely the attempt to foster understanding and cooperation across the boundaries of disciplines that can lead to new ways of gaining and transmitting knowledge. In regard to film, what remains problematic about Russian Formalism is always its specification as a language, as convincingly presented by Peter Grzybek (Grzybek and Koch 2012). His perspective as a linguist is not only an applied example of research that transcends disciplines but also exceptionally helpful and important for the development of more advanced methods that emanate from the Formalists' texts. Research into editing and filmic rhythm can certainly benefit from a quantitative linguistics applied to film. At this point, the still insufficiently researched function of other participants in the film-making process should be mentioned. As an example, I would like to bring up Phil Cavendish (2010, 2013), who deals with the influences of the cameraman in Soviet film.

Formal investigations not only sharpen our view of the film and its structure, they also enable comparative observation with other films. Yuri Tsivian's Cinemetrics project offers this possibility in an inviting and democratic manner and is thus a perfect example for opening resources to those conducting research outside the academic world. It is precisely in film history that valuable knowledge is gathered by enthusiasts, seldom affiliated with an institution, which is often insufficiently recognised. And the portals of universities and archives, for a variety of reasons, are often barred in both directions. Cinemetrics is a positive example for collaboration that transcends (administrative) boundaries.

One aim of Digital Formalism was to investigate the possibilities and the potential of automated film analysis. A great challenge was constituted, not least, by the poor quality of the available film material. A by-product of the project is, additionally, the computer-aided comparative analysis of two prints, which was experimentally carried out on *Man with a Movie Camera*. Using one print from the Austrian Film Museum and one from the EYE Filmmuseum, an algorithm was tested for its functionality (Zaharieva and Breiteneder 2010). For formal analysis powerful computer programmes are still necessary and must be adaptable for use in the respective area of research. This pertains to assistance with manual annotation on the one hand and, on the other, to the further development of automatic video analysis of visual elements and narrative units. Although there is ample literature on the computer science side, there has to date been little interchange with film scholarship regarding potential areas of application. Formal investigations can, in turn, contribute to the area of preservation and fill gaps in the chronicling of film history, as I have pointed out in the case of *The Eleventh Year*. Without doubt, there is potential here for meaningful cooperation between film archives and computer science, although it does always require the expensive digitisation of film material. The generation of quantitative data sometimes provides an impetus for further research. In the project, however, and beyond it, I repeatedly reached the limits of software solutions. To my way

of thinking, not even the relatively simple task of shot recognition has been satisfactorily solved yet, at least not in such a way as to enable the work of humanities scholars without programming skills.

What I could only hint at in this book, even though it should be a significant component of formal film analysis, is statistical evaluation. My own attempts, on the basis of Vertov's data, are intended as a first step, in order to make simple trends visible. The results do at least show which shot lengths Vertov used most frequently and how this differs from film to film. Here, too, interdisciplinary collaboration is required, as is one's own willingness to acquire familiarity with some of the basic terms of statistics.

Another way to view, arrange and interpret the data from formal measurement is visualisation. Depicting the filmic structure in graph form is for academic film analyses and historical investigations both a valuable and meaningful complement to the customary close reading. On the one hand, the reduced visualisation can assist in directly comparing film structures (e.g. the distribution of shot lengths, as in Cinemetrics). On the other hand, there is a great deal of hidden potential in adapting unreduced visualisations for film-historical analysis. Inasmuch as not only numerical values (such as shot lengths in frames or seconds) are the objects of research, but, simultaneously, the visual content of a single frame or a selected sequence are directly available, direct points of reference and orientation result, which may be used in further analysis. Instead of a process of transcription, expressed either in numbers or verbal descriptions, pivotal visual information is retained for the film medium. For annotation, too, this means a further step of development, as some research categories, using computer-aided analysis, may be derived directly from the image and visualised. Manual annotation still remains a significant part of the process, even if only to check the automatically generated data for plausibility.

Visualisations can assist not only in the understanding of complex films (as in Vertov's case); they also enable visual comparison with other films. One may be stimulated by the graphic depictions to insights into the director's work method, which, for various reasons, he may not have committed to paper or are concealed within the films' complex structures. Visualisation can, on the one hand, be used exploratively. When one combines the respective first frames of each shot, specific formal procedures are revealed graphically which can only be guessed at while viewing the film. Individual terms from Vertov's film theory, too, can be more easily reviewed within the film in this way, without the necessity of drafting lengthy shot protocols and subsequently even located in relation to the social environment. A quite banal advantage is already obvious when one is searching for certain motifs, such as "Lenin," in a film. At a glance (or a zoom in) at the visualisation, one obtains at least an overview of the number of the motif's appearances and where it has been deployed. Even if an image-recognition programme could perhaps accomplish such a task faster and more precisely, in our case the unity of the editing components is retained, and the information content is thus greater. I think it is precisely here that it is possible to show how a starting point suitable for answering many questions can be arrived at with relatively simple functions of software such as ImageJ.

On the other hand, the use of graph depictions plays a direct role as a tool for argumentation when talking about film as an art form and artistic practice in general. The accompaniment of a text with images from the film significantly condenses a long verbal description of uncertain effectiveness, of which a transcription process is a necessary part. Naturally, the visualisations presented in this book represent, in turn, a step towards abstraction, which differs from the pure reproduction of a frame from the film or the embedding of a video clip, but the unreduced visualisation nonetheless connects to an intuitive understanding of the content. It should not go unmentioned that reservations regarding visual depictions in the humanities have a long tradition rooted in the critical attitude towards "the image," which also led to disciplines such as image studies and media studies being established in the first place. To mention only one example, the writings of Rudolf Arnheim were received in various disciplines; both art history and media studies, as well as psychology (especially Gestalt theory), were marked by his influential research. There can be no doubt that his book *Visual Thinking* was written with interdisciplinary aspirations. At the end of his considerations, the recognition of visual perception is for Arnheim a cognitive activity both for science and for the creators of art. He sees the latter as a textbook example, as he defines artistic activity as a form of contemplation, in which perception and thinking are inextricably linked – thinking with the senses, in a manner of speaking.

Vertov's film theory was generated by his practical film work, and his artistic practice can therefore only be understood, I suggest, if the films as strips of images (as a sequence of individual images) are graphically simulated. For the revolutionary director, film was not only a temporal art but also a sequence of images which all possess their own individual attributes. Vertov relocates the "montage units," utilising these attributes, not only *within* a film but even inserts them in various films, in both cases creating new meaning through the new context. Unreduced visualisations accentuate the image content and thus function as an intersection with Vertov's own filmic practice. The procedures presented here can therefore be understood as a kind of inversion of Vertov's *kinoglaz* concept, in which the camera's mechanical eye is conceived as a penetrating, microscopic and visually searching tool.

The data also provides the basis for the discovery of specific formal procedures, which may then be investigated, also for their possible political functions, as in the example of the portrayal of Lenin and Stalin in Vertov's films. In the Soviet Union of the 1920s and 1930s, artists worked in a difficult environment which could also be life-threatening. Political ideas had to be transmitted as well as possible, whether from conviction or conformity. Vertov's use of human faces in close-up, for example, enables conclusions to be drawn about the working method of a director in a totalitarian regime who had to make a shift between avant-garde art and the ruling norms. Comparisons of the movement within the image (the interval term) over a longer period can also lead to conclusions about the manner of working in the restrictive climate of the Soviet Union in the 1920s and 1930s. By contrast to the lengths of shots, Vertov had little control over the movement within the image and, above all, was unable to plan it precisely in advance. In this respect he was largely

dependent on the material delivered to him by the cameramen, even though there is written evidence of his attempts to influence camera angles, shot sizes and frame rates. Vertov's fundamental difficulty, of designing certain patterns of movement precisely at the editing table, manifests itself in the contemporary visualisations, as Manovich determines: "Examining the graphs, we also see that the proportion of the film that has systematically varying shot lengths is larger than the part that has movement patterns" (Manovich 2013).

The transition to social realism and the later de-Stalinisation required interventions in works of art; these were rarely authorised by the artists. There are examples of both in Vertov's work. There are films by Vertov and Svilova that have been enriched with images of Stalin and some that were only reworked after Vertov's death. As the total number of sources for these is quite limited, formal analysis and investigation of materials may eventually yield more knowledge. Such an investigation has already provided valuable guidance for the restoration of *Man with a Movie Camera*, enabling the film's original condition to be reconstructed.

Not least, the interpretation of individual procedures may lead to evidence of influences quite apart from art and politics. Vertov's film theory was also influenced by his studies with Bekhterev, and one may find interconnections to and ideas shared with the biocosmists and similar trends of Vertov's time. The manipulation of time in his films is a trace that may be discovered and followed.

There is no doubt that formal quantitative or statistical film-scholarly research, with or without visualisation, can only succeed meaningfully within the framework of interdisciplinary collaboration. Above all, the cognitive branch of film studies has raised important questions for discussion in recent years, with quantitative analysis and visual depiction meanwhile being included in an attempt to answer them. Worthy of mention at this point is the work of the psychologist James Cutting and his research team, who carried out their analyses on a corpus of Hollywood films, also analysing and explaining the mutual influences of film production and audience effect based on the development of current blockbuster cinema. I am also, however, thinking of renowned film scholars such as David Bordwell and Kristin Thompson, whose influential writings continually explore the ways in which the effect on audiences of the individual building blocks and the structure of a film may be described. It is worth noting that such investigations are only beneficial when supported by a comprehensive and detailed knowledge of film history, as well as by an understanding of the technical processes of practical film-making. Only then, as Bordwell says, can one proceed from analysis to explanation and finally to the discussion of superordinate concepts such as narration or film style.

Beyond that, there is potential in collaboration with film-makers and artists. Both in the research into rhythm and into cognition, interesting and overdue systematic investigations may be expected as regards the formulation and depiction of such complex concepts. As visualisations are constantly moving between pure visualisation of information and interactive, as well as artistic, visualisation, they may perhaps offer a common level of output and communication for an interdisciplinary understanding that is not always unproblematic, transcending a depiction that is verbal and purely numeric.

Many demands made of an automated computer-aided analysis are, though, very specific and must be developed for individual cases. Manfred Thaller is one of those who suggests a productive further development for both sides – computer science and the humanities. In his opinion, a computer science is required in which "the postulate that information must be consistently depicted is replaced by data structures and algorithms which can deal consistently with inconsistency, thus fulfilling the inherent demands of the humanities and through which an information society is overall more adequate" (Thaller 2014). In return, a humanities is required which has a clear idea of what may be implemented algorithmically, in order optimally to concentrate on "the rest" (Ibid.). This rest, not without reason in quotation marks, is the actual challenge for researchers, not the error-free and rapid computer-aided video analysis (as in our case).

There is, naturally, much to be caught up with as regards digital tools to support the process and to take into greater consideration the film's material aspect, including its digitisation. A willingness to learn, on both sides, could help close these gaps quickly. The humanities traditionally deal with issues that cannot be formalised, or at least not simply, and it is not necessary for this to change in the future. On the other hand, it would be a missed opportunity if the attributes of a work of art that did lend themselves to automatisation and formalisation were completely relinquished to computer science. It is precisely the attempt to describe in distinct units something that does not, at first glance, seem to be formalisable that can initiate a necessary thought process.

It should also be mentioned that research in the digital humanities has a largely interdisciplinary orientation, just as its teaching does, and this is not always free of friction. Despite a good work environment and common goals, there may be an imbalance in the exchange of knowledge and the flow of information. This is often the result of unconscious hierarchies within the disciplines, which still adhere to a principal subordination of thinking to computing. Elijah Meeks of Stanford University critically remarks from his own observation that unthinking use of digital tools, techniques and objects in the humanities encourages a situation in which complex and demanding problems are reduced to a comfortable "fitting in" with software (Meeks 2011). For me it is not enough when John Unsworth maintains that the humanities and social sciences should specify the subjects for research, while computer science investigates the possibilities. This is basically nothing but a continuation of old role models, with theoreticians on the one hand, and practitioners on the other. The practice of applying for funding programmes and the necessity of defining milestones and work packages promotes such an actually unproductive division of tasks. Despite all the pressure to specialise, it does not make much sense nowadays, nor does it accord with my experience of the resumés and profiles of the people we encounter in libraries, archives, universities and in extramural research institutes. According to Manovich, there is in this context no doubt about the usefulness for the humanities, such as image or film studies, of visualisations, for it is precisely in the humanities that one should no longer be satisfied with reduced or transcribed data:

> If humanists start systematically using visualization for research, teaching and public presentation of cultural artifacts and processes, the ability to show the artifacts in full detail is crucial. Displaying the actual visual media as opposed to representing it by graphical primitives helps the researcher to understand meaning and/or cause behind the pattern she may observe, as well as discover additional patterns. (Manovich 2010)

While in the natural sciences, the focus is on general laws and models, the observations made in the humanities more usually go from the smaller to the larger scale. Manovich ultimately ventures a forecast of the near future of visualisation tendencies with a focus on unreduced visualisation:

> Does this mean that what we took to be the core principle of information visualization during its first three centuries – reduction to graphic primitives – was only a particular historical choice, an artefact of the available graphics technologies? I think so. Similarly, the privileging of spatial variables over other visual parameters may also turn out to be a historically specific strategy – rather than the essential principle of infovis. The relatively new abilities brought by computer graphics to precisely control – that is, assign values within a large range – color, transparency, texture, and any other visual parameters of any part of an image allows us to start using these non-spatial parameters to represent the key dimensions of the data. This is already common in scientific, medical and geovisualization – but not yet in information visualization. (Ibid.)

My work on a selected body of films from the Soviet Union of the 1920s and 1930s, a time when new visual forms of expression, research into the interaction of art and speed as a motor and preferred means of expression of a revolutionary art were dealt with intensively, takes up theoretical considerations that were already expressed or hinted at in Vertov's lifetime and tries to develop them further. It could thus be a first step towards the development of a broader methodological approach for future film-scholarly investigations, one that extends from concrete assistance in quantitative film analysis, through independent data visualisation, all the way to film-historical explanation. Perhaps this will subsequently create the conditions for further contributions to a poetics of film, in which an individual film work or the person of a film-maker can be accorded a place in the larger social and historical context.

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