FQS FORUM: QUALITATIVE SOCIAL RESEARCH SOZIALFORSCHUNG

Volume 10, No. 1, Art. 18
January 2009

Reporting Large-Scale Qualitative Research: The Ergography

Bart Penders & Annemiek Nelis

Review Essay:

Andrew Webster (Ed.) (2006). New Technologies in Health Care. Challenge, Change and Innovation. Houndmills (UK): Palgrave Macmillan, 275 pages, ISBN 13: 9781403991300, £ 58,00 Hardback, Blue Cover

Key words: reporting; large-scale; research programs; ergography; science and technology studies

Abstract: As social science research programmes tend to increase in scale, reporting their results in a coherent manner is growing more difficult. Andrew WEBSTER's edited volume presents a wealth of social science research and is a pleasant read for many reasons. However, its sheer vastness can hardly be contained in an edited volume. In this article, we review the book itself whilst we also discuss what it means to report about large scale social science research programmes and propose an alternative mode for this reporting: the ergography. The ergography provides a window not so much on the results of the programme but rather on the work that is being done in the context of a research programme. The ergography allows for an active stand from the reader and aims to bring the reader as closely as possible to the laboratory, doctor's office or hospital that has been part of the research.

Table of Contents

1. Opening the Blue Book

Doing qualitative research requires reporting qualitative research. Often we envision the report before starting the research: a journal article, a book, or perhaps even a series of books. Never can social science detach the report from the research, nor should it. Here, we review the edited volume *New Technologies in Health Care*. The authors, stories and technologies that we encounter in the edited volume, *New Technologies in Health Care,* are not just a random collection of people and technologies, but are part of a large research programme called

Innovative Health Technologies Programme[1] (IHT). The IHT programme ran from 2000 to 2006 with a budget of £5 million from the UK's Economic and Social research Council (ESRC). Andrew WEBSTER was both the programme director of the IHT programme and is the editor of this edited volume. The IHT programme is one of the first coherent, large-scale qualitative research initiatives and the edited volume, thus, one of the first reports of qualitative research on a large scale. [1]

The scale is staggering. In this 275 page volume, no less than 52 authors who represent 31 research teams (encompassing many more researchers[2]), describe more than twenty different technologies or technology sets. Such technologies include the wheelchair, hip replacements, xenotransplantation, health information management via the Internet and much more (see Table 1 for a comprehensive overview). WEBSTER introduces innovative health technologies as "a similar mix of the strange, uncertain and perhaps forbidding, combined with a sense that you've seen or experienced something like it before" (WEBSTER, p.1). The research programme, IHT, attempts to deal with any new demands such technologies or their implementation processes may have for patients, practitioners, innovators and regulators (WEBSTER, p.8). Although the IHT research projects were not all designed to be comparative studies, most of the chapters take a comparative perspective. In the editor's words, this book presents "some of the key results of a five-year research programme, but not all" (WEBSTER, p.ix). [2]

Fortunately, this review only has two authors, yet we recognise the position Andrew WEBSTER has had. We, Bart PENDERS and Annemiek NELIS, are also involved in a coherent large scale qualitative research programme and both our research programs are funded by a national research council. One of us, PENDERS, is a postdoctoral research fellow; the other, NELIS, is general director of the Centre for Society and Genomics at the Radboud University in Nijmegen. We too, will have to engage in constructing a coherent report when our research programme draws to a close. [3]

The editor chose to mobilise no less than 52 authors and 22 research projects in one single book. In this book review, akin to his project, we also we have to use our imagination and writing skills in order to reduce the 275 pages of the book into a review essay of a few thousand words. Inevitably, writing is reducing. [4]

WEBSTER and his co-authors had to reduce as well. Both their empirical work and the physical work that they put into the many projects that were conducted as part of the IHT programme had to be reduced to a series of stories and chapters: a string of words, a text. The reduction-work of the researchers involved in the IHT program, we may say, is both daring and difficult. The individual chapters of this book do not present the work of individual researchers or even research teams but present some of the collective efforts of the programme. Most chapters

1 See http://www.york.ac.uk/res/iht/introduction.htm.

2 The acknowledgements of some chapters list research teams of up to nine researchers in additional to the chapter authors.

are written by two to four authors and present two or three case-studies, describing two or three innovative technologies. These technologies include for example the wheelchair, tissue-engineering, pharmaceutical developments, alternative medicine, hip-replacement therapy, brain-imaging, web-based information and support systems, and genetic testing and diagnosis. The chapters thus refer to a wealth of information and resources (the daring), but the chapters necessarily also are limited in length and thus are limited in what they can do (the difficult). [5]

2. Content of the Book

Due to the overall set up that the editor has chosen, the chapters in this book almost necessarily lack the empirical rigour that we as Science and Technology Studies (STS) scholars have learned to like. The reader often feels (s)he wants to know more about the cases that are being described, in particular about the empirical details. Within STS, the devil often is in the detail, or rather in *thick description*, but this is hardly possible in a book that includes so much. This is not a problem in every chapter, but in a large number of chapters it is (and sometimes this irritates as well). In the latter chapters, the question of "how people and society will be affected by, and in turn affect, innovative health technologies" is answered by a series of statements rather than an argument or line of reasoning. Occasionally, one simply misses the attempt for solid explanations. [6]

2.1 Thin description

Not only the level of empirical detail, but also the comparison between different technologies are both daring and difficult.[3] Nearly all chapters are based on the comparison between two or three innovative technologies. In some chapters such comparison leads to unexpectedly interesting conclusions and observations such as the comparison between digital health information and brain imaging techniques (Ch. 8) and between the replacement of hips and lenses (Ch. 10). [7]

Chapter 8, written by CULLEN and COHN, compare two seemingly distant technologies: collaborative knowledge systems that provide digital health information and support, and brain imaging techniques. The authors focus on the values that become embedded in the design, development and use of these technologies. The chapter shows that while collective knowledge systems generally are seen as more advanced, more accessible and low-cost, it shares many features with the less advanced (greater degree of flexibility), high-tech, expert-led and expensive brain-imaging techniques. One interesting conclusion is the lack of public- and citizen-engagement in both.

> "The old language of empowerment in public health discourse, which stressed patient 'ownership' as key to revising the professional-patient relationship, may now be being

3 Even the publisher apparently, at one point, did not believe in the project anymore. On August 14th, 2007, months after the actual publication of the book, the publisher's website stated, "publication cancelled" (http://www.palgrave-usa.com/catalog/product.aspx ?isbn=1403991308).

> turned on its head. For it is now the distinct lack of any clear ownership […] that potentially provides the patient with a means to determine and control their engagement" (p.125). [8]

The authors describe new forms of social, economic and institutional alliances between both professionals and experts and between citizen, patients and practitioners, for example. The authors show technological design and engineering process still appear to reinforce dominant hegemonies. Despite this, however, there also is room in each case for new modes of individual appropriation of technologies and for what GIDDENS has called "dialogic reflexivity" (CULLEN & COHN, p.126). [9]

In Chapter 10, METCALFE and PICKSTONE track innovation systems surrounding (1) the intraocular lens and (2) total hip replacement through post-war Britain. METCALFE is a student of contemporary innovation, whereas PICKSTONE is a historian. Drawn from innovation studies, they use concepts such as *systems* and *learning* and describe two triangular relationships of surgeons, companies, and (later) regulators. They manage to summarise their argument in one, well-chose sentence: "The effect of particular medical innovations, we may conclude, can extend far beyond their technical design spaces" (p.160); but more importantly, they present a compelling analysis of the social and economical history of the emerging industry of medical devices through their case studies. [10]

In other chapters, the comparison does not work as cases simply address different issues or are presented in such a way that they remain stand alone pieces of information. Examples of the latter are the comparison between the on-line pro-anorexia movement and the transitions in the treatment of HIV (Ch. 7) and the comparison between technologies concerning birth, childhood and death (Ch. 9). [11]

In Chapter 7, WARD, DAVID and FLOWERS discuss "patient expertise" in relation to innovative health technologies. Two cases are being discussed: the HIV treatment that is known as Highly Active Anti-Retroviral Treatment (HAART) and an on-line movement promoting anorexia, also known as pro-ana. The authors conclude they have shown "expertise emerges in different forms and has varying status, depending on the contexts of its production" (p.109). However, while both cases touch upon issues of disease management and expertise in some respect, the contexts of production that characterise the on-line debates within the pro-ana movement and HIV treatment are *so* different that the two cases never become comparable. The on-line pro-ana fora are presented as space for anorectics to discuss their experiences, feelings and behaviours free from societal prejudices, without promoting anorexia as a preferred way of life. The pro-ana case then is analysed as an example of resistance against medical and social models of anorexia. The discussion about HAART touches upon a whole number of issues to do with changing life-styles, uncertainty and issues of access and survival. The HAART case then is analysed in terms of identity- and

citizenship-formation. Despite the use of one or two concepts that would apply to both cases, they remain separated case studies. [12]

In Chapter 9, the authors also fail to bring together the chosen cases. In this chapter, a whole score of authors combine three studies into a single chapter. SEYMOUR, ETORRE, HEATON, LANKSHEAR, MASON and NOYES review three groups of technologies, namely (1) *in silico* decision protocols, (2) a set of technologies which are able to take over bodily functions of children (including, but not limited to renal dialysis, artificial nutrition and pacemakers), and (3) technologies postponing death (such as resuscitation, chemotherapy and hydration), as well as making it "easier" to die (such as pain relief, nursing care and nutrition). Firstly, the latter two groups of technologies are mainly directed at patients and their families, whereas the first technology is primarily directed at health professionals. While it makes a comparison very difficult, this difference is hardly addressed. Secondly, the third case study relies heavily on empirical sources (pp.141-144), whereas these are mainly absent from the first two case analyses. Although the analyses of each of the cases are very worthwhile, the main result is that these three stories remain three stories. [13]

The various qualitative research methodologies employed by the research teams within the IHT programme (as listed in Table 1, column 4) have resulted in a vast amount of high quality qualitative research data. Because of the variety of types of data, as well as the rigour in which it has been pursued, the IHT programme can legitimately boast a wealthy empirical foundation. While only snippets of this data can be found in the pages of the book, sadly, most of the qualitative research data is hiding behind the lines of the reference section. [14]

2.2 Reviewing a programme

Anyone who has ever reviewed an edited volume faces a familiar challenge. Generally one begins such a job optimistically, but soon realises that it is impossible to do justice to every single contribution to an edited volume. Often this is because of the limited amount of space that journals have available for book-reviews, but, even in online journals such as *FQS*, where text length is unrestricted and authors have many degrees of freedom (MEY, 2000), some contributions will inevitably be overrepresented as compared to others. One has to decide either to discuss only part of the chapters or to focus on the overall message of the book. The last option, although more interesting, often is a lot more difficult because of the great variety one encounters in most edited volumes. The same is true for the book under review. We have not managed to bring the variety of the book back into one heading, not will we ever be able to. To make it up to you, but also to the authors of *New Technologies in Health Care*, we offer a short list of names, titles and topics (see Table 1).

Author names	**Chapter Title**	**Topic (IHT's)**	**Research Method**
BHARADWAJ, PRIOR, ATKINSON, CLARKE & WORWOOD	The Genetic Iceberg: Risk and Uncertainty	Genetic haemochromatosis (GH) and cancer genetics: dealing with risk and uncertainty	Semi-structured interviews
HUNDT, GREEN, SANDALL, HIRST, AHMED & HEWINSON	Navigating the Troubled Waters of Prenatal Testing Decisions	Prenatal screening and the difficulties surrounding "informed decision making"	Postal questionnaire (containing both qualitative and quantitative elements), semi-structured interviews and hospital observations
KERR & FRANKLIN	Genetic Ambivalence: Expertise, Uncertainty and Communication in the Context of New Genetic Technologies	How citizens and professionals cope with the complexities and ambivalences of genetic information and genetic knowledge	Lay focus groups and expert focus groups
NETTLETON & HANLON	"Pathways to the Doctor" in the Information Age: the Role of ICTs in Contemporary Lay Referral Systems	Health information on the Internet and through telephone consultations: how "new" is this technology?	Semi-structured interviews
GREEN, GRIFFITHS, HENWOOD & WYATT	Desperately Seeking Certainty: Bone Densitometry, the Internet and Health Care Contexts	Women's decision making regarding the use of hormone replacement therapy (HRT): Internet versus bone densitometry	Audio-recorded doctor consultations and semi-structured interviews
FINCH, MAY, MORT & MAIR	Telemedicine, Telecare, and the Future Patient: Innovation, Risk and Governance	The disappearance of telemedicine, the success of telehealthcare and telecare: how innovations and their users are configured in practice	In-depth interviews and observations at conferences and seminars

Author names	**Chapter Title**	**Topic (IHT's)**	**Research Method**
WARD, DAVIS & FLOWERS	Patient "Expertise" and Innovative Health Technologies	What constitutes "expertise"? Comparing the online pro-ana movement and transitions in the treatment of HIV	(Autobiographical) Narratives drawn from online sources and semi-structured interviews
CULLEN & COHN	Making Sense of Mediated Information: Empowerment and Dependency	Brain imaging and collaborative knowledge systems: how technology is shaped by both interpretation and use	Literature analysis
SEYMOUR, ETORRE, HEATON, LANKSHEAR, MASON & NOYES	Time, Place and Settings: Negotiating Birth, Childhood and Death	Technologies that shape identity and society: fetal well-being during labour; chronically ill children; and decisions concerning the end of life	Observations at maternity ward, interviews, focus groups and a central discussion day.
METCALFE & PICKSTONE	Replacing Hips and Lenses: Surgery, Industry and Innovation in Post-War Britain	The intraocular lens (IOL) and the total hip replacement (THR): understanding the trajectories of transformational medical innovations	Analysis of historical textual sources
PARR, WATSON & WOODS	Access, Agency and Normality: the Wheelchair and the Internet as Mediators of Disability	Internet and wheelchair technologies. Exploring issues of access, control and the autonomy of disabled people	Literature analysis, analysis of online narratives, participative methods and action research in aphasia settings
MARTIN, ABRAHAM, DAVIS & KRAFT	Understanding the "Productivity Crisis" in the Pharmaceutical Industry: Over-regulation or Lack of Innovation?	It is often claimed that over-regulation prohibits innovation. The relation between innovation and regulation is much more complex	Analysis of (grey) literature

Author names	**Chapter Title**	**Topic (IHT's)**	**Research Method**
BRWON, FAULKNER, KENT & MICHAEL	Regulating Hybridity: Policing Pollution in Tissue Engineering and Transpecies Transplantation	Xenotransplantation and human tissue engineering: how are such new boundaries of life being regulated?	Interviews and (grey) literature analysis
SALTER	Cultural Politics and Human Embryonic Stem Cell Science	Human Embryonic Stem Cell science: the relationship between therapeutic promise and the cultural values of EU member states	(EU) Policy document analysis
CHATWIN & TOVEY	Regulation and the Positioning of Complementary and Alternative Medicine	The interpretation, use and evaluation of *Complementary and Alternative Medicine* (CAM) in patients with cancer in the UK and Pakistan	(Scholarly) Literature analysis
ARMSTRONG	Evaluation as an Innovative Health Technology	The development and standardisation of *Evidence Based Medicine* (EBM) as integral part of the development of innovative technologies	(Scholarly) Literature analysis

Table 1: *The briefest of summaries.* This table provides a brief overview of the content of the IHT volume. Using tables like this, e.g., *tables of content*, may seem a rather orthodox way of presenting the book, it is at the same time a textual and visual aid in displaying the immensity of the programme that the book tries to cover. [15]

How to do justice to the authors and give the reader a fair idea of what the book is about without reducing the content and context to a single statement? How to address in only a few sentences the efforts, energy and results that have gone into the production of an article? Within the social sciences, of course, this also is a contested issue. Texts never simply "represent" or mirror either the world or the work of an author. Such process always includes processes of translation and transformation (e.g. LATOUR & WOOLGAR, 1986 [1979]; LATOUR, 1987). As scholars, we like to open the black boxes of scientists—showing the intermediaries that are necessary to move from the world to words, from the lab to scientific text or facts—but by doing so we necessarily create our own black box (of text, in this case: a blue box). This is all the more true for the condensed

way in which we report the results of large research programmes, let alone the review of such programmes. [16]

3. Reporting Research: The Ergography

Like most academics, social scientists are acquiring expertise in managing large research programmes. However, the craft of reporting about such programmes is still somewhat underdeveloped. We—that is the collective qualitative research community—seem to use little imagination and do not proceed beyond what we know and are familiar with: articles and books. WEBSTER and his co-authors clearly aim to provide a synthesis of their project—a choice that we think should be welcomed and appreciated—but it is questionable whether an edited volume is the most suitable form. Reporting on large programmes is difficult. This is true both for WEBSTER and for any other programme manager (such as ourselves). What could WEBSTER and his 51 co-authors have done differently? How can we report and present the results of considerably large research programmes? We suggest, WEBSTER could have produced not an account of the *results*, but an account of the *work* invested in the programme, which we will call a collective *ergography*.[4] Unlike an edited volume, an ergography presents not just a series of texts or reports but provides a window on a whole series of texts and therefore to the work that went into the research and to the programme as a whole.

4 Derived from the Greek words γραφία (graphia), meaning record or account, and εργο (ergo), meaning to work, the product of labour, an act accomplished. The word ergography is currently used every so often for a biography that limits itself to the professional life of a person. The ergography we propose is not limited to the work and product of an individual, but of a research programme, in this case the "Innovative Health Technologies" programme, hence a *collective ergography*.

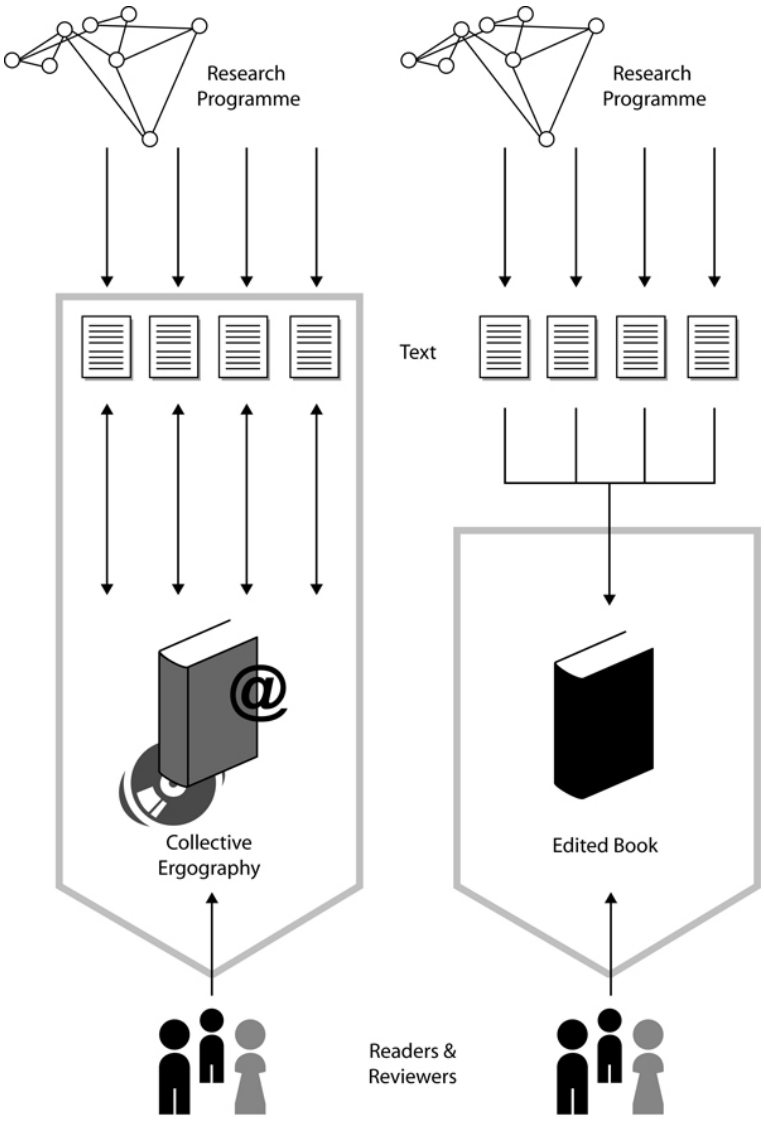

Figure 1: *The ergography explained*. A collective ergography is a text that provides a window on the labour and work that has gone into a qualitative research programme. It provides links to primary texts such as research proposals, PowerPoint presentations, observation notes and journals, interview transcripts and (un)published papers. It significantly differs from an edited book because it shows the network of translations from world to word. The ergography contextualises and mobilises these texts for the benefit of the reader or reviewer. The grey box indicates the reader or reviewer's scope. In case of an edited book, as shown in the right column, the texts that together shape the research programme are largely out of reach for the reader, as they are listed passively or often not listed at all. The basis of the ergography is this body of texts to which the reader obtains direct access, as shown in the left column. [17]

An ergography is a volume dedicated to reporting the work and results of large-scale qualitative research programmes. The ergography mobilises a plethora of case studies and theoretical innovations that the research programme has yielded, not by summarising them, but by granting access to the work that went

into the research; published or unpublished texts, interview transcripts, lectures and presentations given, working papers, discussions, letters, e-mails and PowerPoint slides. To produce an edited book, authors and editors select, integrate and delete from the performed research, resulting in a product that hides the work that was needed to conduct the research and that exhibits many weaknesses, which have been listed above. Figure 1 graphically displays the key differences between the edited volume and the ergography. The ergography provides a window onto the work that is being done in the context of a research programme and is not restricted to ink and paper. [18]

Since readers cannot be taken into the laboratory, doctor's office or hospital, the ergography aims to bring them as closely as possible to the empirical study. "Thick description" is one of the strengths of empirical research and secondary or tertiary documents generally do not excel in it. Via "dense referring", an ergography attempts to provide indirect access to detailed descriptions—in all styles and shapes. [19]

3.1 The reader as the ethnographer of the text

The ergography can be considered a reverse translation process, back from word to world. Since it is an attempt to open up the research through the reporting text, the reader acquires a different role. He is drawn into the practice of research itself and thereby invited to oversee, critique and value the sources that underlie the ergography. If a reader, for instance, has access to interview transcripts, field notes or full text observation journals (which are not considered private), (s)he can actively participate in the research process. Through the ergography, the reader himself has the ability (but not the requirement) to become an ethnographer—an ethnographer of the text (WOOLGAR, 1988). Accordingly, an ergography can be a publication that heavily relies on ink and paper, but need not be restricted to it. Of course, occasionally, access to full text transcripts may be restricted for whatever reason. However, even in less "ideal" circumstances, the role of the reader, who, in the STS tradition never is a passive observer, becomes even more active.[5] [20]

The ergography is not a revolutionary or innovative way of publicising results. For some time, the natural sciences have, for example, been using text books that are accompanied by CD-ROMs and DVDs. These contain sounds, images and videos, additional documents, tutorials, interviews, and much more. Such complimentary multimedia tools are additional to the text and provide regular updates, websites that contain additional cases, problems, explanatory videos, texts and again, links to other sources.[6] [21]

5 One can easily envision an ergography to revisit the "new literary forms", a style of hyper reflexive publication popular during a brief period in Science and Technology Studies (see especially WOOLGAR, 1988). The ergography proposes a novel literary technology, proposing a change in the way we craft and experience the relationship between text, research reported and the reader.

6 Here, we provide one example of a molecular biology text book for you to browse, namely "Molecular Cell Biology" (LODISH et al., 2003). It comes with a CD glued in the back, as well with a fully equipped web site, stuffed with multimedia and additional information, which can be

Also the Innovative Health Technologies programme has taken a first step to provide additional information and links. WEBSTER writes in the acknowledgement of the book that it "captures some of the key results of a five year research programme, but not all: the full details are available on the Innovative Health Technologies programme website (www.york.ac.uk/res/iht)" (p.ix). It has to be said, this website is a very well-maintained and user-friendly site. However, the website and the edited book exist next to one another, instead of complementing each others existence. The fact that the reference to the website is presented in the acknowledgements and not in the main text, is telling. The website presents not so much "original" material showing the work of each and every project but functions very much as a—very good—information device: it summarises research projects, teams and results. [22]

As we saw in figure 1, the ergography still has the form of a book. However, accessing the original work that went into the research is not provided by merely listing texts. References, listings and sources still need to be contextualised and related to one another. Ergographical chapters are *meta-texts* that are contextualised and that reflect on the assembled reports. Such texts only sporadically visit the detailed level of the research process itself as this is done in the texts that the ergography refers to and that can be found on websites, CD-ROMs or DVDs for example. The chapters found in the collective ergography thus can be rather short. [23]

Each chapter of the ergography refers to and is connected to the original source material; the work that went into the individual projects of the research programme. The editor of the ergography, like the editor of an edited volume, introduces the interconnectedness and relevance of the different parts and explores what has been achieved, what conclusions can be drawn, what lessons have been learned and what discussions and issues need further exploration. In the ergography, the introduction and conclusion of the volume are equally important, if not more important, than the body of chapters in between. [24]

3.2 Returning to the blue book

Let us return to the *New Technologies in Health Care* volume. Surprisingly, the book has to make due with only a few pages of introduction and no concluding remarks whatsoever. WEBSTER writes that "it is not clear what the ending of the book will turn out to be, and even when you get there you can be left hanging" (p.1). How true this is: a conclusion is direly missed. One serious wonders why. Was it a matter of time or of page limitation? Did they run out of steam, or did they fail to produce a coherent ending? We believe the latter cannot be the case, since the programme provides a number of beautiful examples of how technologies affect life and vice versa. [25]

found at: http://bcs.whfreeman.com/lodish5e/. A second element we can borrow from the natural sciences, is the notion of open notebook science, which refers to a style of researching, of doing experiments, in which the laboratory notebook is open for public scrutiny. Since most laboratory notebooks are digital or digitized nowadays, the Internet is the forum of choice. Open notebook science has recently even entered Second Life (BRADLEY, 2007).

For instance, one might argue that a lot of the programme has focused on the issue of power: are people empowered by health technologies or do these technologies overpower people? Throughout the book, this issue regularly comes to the fore. In many instances, citizens are surprisingly able to empower themselves with the new technologies. An interesting example of this message can be found in the chapters addressing genetic technologies. While much of the STS literature—and also some of the articles in this book—emphasis the disciplining and normalising effects of genetic technologies, the programme at hand clearly shows that despite all uncertainties, risks and troubles that accompany genetic technologies, people have managed to grant it a place in their live. It may be difficult and it may take a lot of work, but genetics and humanity can coexist. However, it would have been nice to find such overall comments in a concluding chapter. This is immensely missed. [26]

Having said this, *New Technologies in Health Care* is well worth the read, particularly because it touches upon so many technological changes. Nevertheless, the reader needs to keep in mind that reading the book is a research project in itself—an attempt to find, assign and evaluate the research invested in it. [27]

4. Demarcating the Public

At the end of the introduction WEBSTER states that the research programme aims to add to what COLLINS and EVANS have coined *interactional expertise*. Interactional expertise enables an individual to meaningfully comprehend and engage in debate and discussions in a practice that is not native to him. According to COLLINS and EVANS, researchers actually performing the empirical research may, over a *very long* time, be able to reach this level of expertise (COLLINS & EVANS, 2003; COLLINS, EVANS, RIBEIRO & HALL, 2006; COLLINS & EVANS, 2007). For the reading scholar or student, it is out of reach, just as the lab or hospital is out of reach when we limit ourselves to textual resources. WEBSTER's claim that the reader may obtain interactional expertise seems an overstatement. The ergography, on the other hand, may be a more appropriate source to at least *foster* interactive expertise as the ergography expands the access of the reader further in the direction of the site of research. An ergography facilitates the production of interactional expertise more efficiently then an edited volume ever could. Nonetheless, an ambition of perhaps epic magnitude it still remains. [28]

By granting access to original research material and texts, the ergography is very much an *academic* publication. Its character presupposes a relatively high familiarity with the subject, thus restricting its audience to professionals and scholars. The collective ergography we propose is certainly less suitable for the general public, if at all. Also in this respect, our proposed ergography fits with the ambitions of WEBSTER and his co-workers. The back of the IHT book lists "students and researchers in social science, health studies and medical schools" as the intended audience, thus complying with the high familiarity required on the subject. [29]

5. Conclusion: The Text in the Text

The text that you are currently reading is a book review, as well as a review of a book that does not exist (the ergography of the IHT volume) as well as a critique of edited volumes and of the reviews of these volumes. At the empirical heart of our argument stands the IHT volume, which has provided us with a start and finish line of a thought process that resulted in the ergography. It has inspired us to write a book review which, next to description, contextualisation and evaluation (MEY, 2000) has taken a step towards making an additional contribution. [30]

We have attempted to demonstrate what an ergography may look like and why we think it is a useful way to report about the research in large research programmes.[7] Most importantly, however, our contribution has been a discussion about the interconnectedness of texts and sources. To make use of ergographies routinely (both to produce and to use them) proposes change: however, it does not seek revolution. We envision the ergography to take its place alongside the monograph and the edited book as an alternative full length style of reporting research. [31]

What does our conclusion entail for programme managers such as WEBSTER and ourselves? As academics, most of us are familiar with the tasks that come with the authorship of a monograph and the editorship of a book. What does it mean to be responsible for the assemblage of an ergography? Such a task can perhaps better be described as a stewardship, guiding the process of reverse translation embarked upon by the authors of the meta-texts. What it entails *exactly*, the practicalities and the "tricks of the trade", is, in part, unknown; a learning process is ahead of those who accept such a stewardship and the journey that comes along with it. [32]

As we have shown, WEBSTER and his many co-authors provide some interesting starting points. However, we will need plenty of opportunities to come to terms with a way to report on large research programmes in the nearby future. Andrew WEBSTER already has generated a next chance for himself as he is currently directing yet another big programme, the Stem Cells Initiative[8]. Worldwide, a significant number of other large STS initiatives exist; we ourselves participate in a large programme on ELSA genomics, for example. All of these initiatives struggle with reporting their research. Consequently, we reach out to Andrew WEBSTER, to ourselves and to all others, who direct or are otherwise

7 Initially, we wanted to claim that it was through *dense referring* that we showed what an ergography would look like. After all, this is what one may expect from a review that has as its central proposition the reference between word and world and between text and the work that went into the production of a text. However, if we wanted to organise *dense referring* in this review, we probably should have made available our notes on the individual chapters and our e-mail discussions about the book. Such a reference system, however, not only requires technical tools, it also requires a lot of ordering work. Furthermore, most of these notes were originally written in Dutch. The logistic of an ergographical style, in other words, means a lot of (extra) work, similar to, e.g., *open notebook science*.

8 A website that looks exactly like the Innovative Health Technologies programme website is being assembled and can be found at http://www.york.ac.uk/res/sci/introduction.htm.

engaged in large-scale research programmes, to consider, evaluate, and follow-up on our suggestion. [33]

References

Bradley, Jean-Claude (2007). Open notebook science using blogs and wikis. *Nature Precedings*, http://dx.doi.org/10.1038/npre.2007.39.1.

Collins, Harry M. & Evans, Robert (2003). The third wave of science studies: studies of expertise and experience. *Social Studies of Science*, *32*(2), 235-296.

Collins, Harry M. & Evans, Robert (2007). *Rethinking expertise*. Chicago: The University of Chicago Press.

Collins, Harry M.; Evans, Robert; Ribeiro, Rodigo & Hall, Martin (2006). Experiments with interactional expertise. *Studies in History and Philosophy of Science*, *37 A*(4), 656-674.

Latour, Bruno (1987). *Science in action: How to follow scientists and engineers through society?* Cambridge, MA: Harvard University Press.

Latour, Bruno & Woolgar, Steve (1986 [1979]). *Laboratory life: the construction of scientific facts*. Princeton: Princeton University Press.

Lodish, Harvey; Berk, Arnold; Matsudaira, Paul; Kaiser, Chris A.; Krieger, Monty; Scott, Matthew P.; Zipursky, Lawrence & Darnell, James (2003). *Molecular cell biology*. New York: W.H. Freeman.

Mey, Günter (2000). Editorial note: Reevaluating book reviews: as scientific contributions [19 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *1*(3), Art. 40, http://nbn-resolving.de/urn:nbn:de:0114-fqs0003400 [Date of access: Aug 26, 2008].

Woolgar, Steve (Ed.) (1988). *Knowledge and reflexivity: New frontiers in the sociology of knowledge*. London: Sage.

Authors

Bart PENDERS is a post-doctoral research fellow in the field of Science & Technology Studies (STS) at the Centre for Society and Genomics (CSG), Institute for Science, Innovation and Society (ISIS) at the Radboud University Nijmegen, as well as at the Department of Health, Ethics and Society (HES), School for Primary Care and Public Health (CAPHRI) at Maastricht University, both in the Netherlands. He was trained as a biologist and subsequently studied the politics of large-scale nutritional genomics. His recent publications include *From Seeking Health to Finding Healths. The Politics of Large-Scale Cooperation in Nutrition Science* (Maastricht: Maastricht University Press, 2008). His research deals with the normative effects of large-scale science. He is mainly interested in how facts, knowledge and norms co-evolve, as well as in the political effects of this co-evolution. He currently studies these dynamics in industrial R&D contexts. His other interests include knowledge production on the boundaries of laboratory and computation, as well as the interaction of science, social science and the humanities.

Contact:

Bart Penders

Centre for Society & Genomics (CSG)
Institute for Science, Innovation & Society (ISIS)
Radboud University Nijmegen

PO Box 9010
NL-6500 GL Nijmegen, the Netherlands

Tel.: +31 24 365 2719

E-mail: b.penders@science.ru.nl
URL: http://www.society-genomics.nl

Annemiek NELIS is Associate Professor and General Director of the Centre for Society and Genomics (CSG), Institute for Science, Innovation and Society (ISIS), Radboud University Nijmegen. The CSG is supported by the Netherlands Genomics Initiative (NGI). She has a MA in health science from Maastricht University and a PhD in Science and Technology Studies from the University of Twente. She worked in Cambridge (UK) and Amsterdam before coming to Nijmegen. Her publications and research interests concern patient organisation and representation; the role of social scientists in organising public debate and public engagement; and the production of norms and standards in life science laboratories. Her other interests include science and democracy and what STS scholars have to bring to this.

Contact:

Annemiek Nelis

Centre for Society & Genomics (CSG)
Institute for Science, Innovation & Society (ISIS)
Radboud University Nijmegen

PO Box 9010
NL-6500 GL Nijmegen, the Netherlands

Tel.: +31 24 365 2735

E-mail: nelis@society-genomics.nl
URL: http://www.society-genomics.nl

Citation

Penders, Bart & Nelis, Annemiek (2008). Reporting Large-Scale Qualitative Research: The Ergography. Review Essay: Andrew Webster (Ed.) (2006). New Technologies in Health Care. Challenge, Change and Innovation [33 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *10*(1), Art. 18, http://nbn-resolving.de/urn:nbn:de:0114-fqs0901182.