

## Transparency or Surveillance? The Datascape of European Public Health Statistics

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189

### Data scouts: "We will now talk about your health"

As a resident of a European Union member state, you might receive an invitation letter by mail or a telephone call at home in the early evening, in which you are kindly asked to participate in a health survey. Such European surveys include questions ranging from how you rate your health today, your experience with the health care system and your major health risk concerns, as well as items on chronic illness, mental health, functional limitations and care needs.

In particular as to 'health attitudes' and 'health behaviors', statistical surveys are often conducted via telephone interview and handled by "Computer Assisted Telephone Interviewing Laboratories" (CATI-labs) — call centers for questionnaire-based public health research. In telephone surveys, potential participants are mostly recruited using random digit dialing. This sampling technique that uses randomly generated telephone numbers is often used in opinion polls, statistical surveys and marketing research. The interviewing lab can be located at a (governmental) research institution, at university departments of public health or outsourced to private companies.

For the Eurostat survey's *European Health Status Module* (fig.1)<sup>1</sup>, interviews are conducted face to face in respondents' homes. The survey is part of the basic health data reported to the *Statistical Office of the European Communities (Eurostat)*. It includes approximately 1,000 participants from each member state and combines representative and random sampling procedures when recruiting participants. Consumer surveys are well known from marketing research, yet this (anonymized) intrusion into the private sphere via telephone or home visit is performed as part of European health governance and aimed at ensuring equality in health matters.

The term "survey" as "the act of viewing, examining, inspecting"<sup>2</sup> has been imported to social science from land surveys and geological surveys in the 19<sup>th</sup> century. In the health sciences

1 See Eurobarometer (2003): *The Health of Adults in the European Union*. Special Eurobarometer no. 183-7, 37-41. Jean M. (1987): *Survey Research in the United States: roots and emergence 1890-1960*, Berkeley.

2 Oxford English Dictionary Online (2007); Converse,

extensive medico-social surveys<sup>3</sup> were increasingly conducted in the mid 20<sup>th</sup> century. They supplemented earlier 'vital statistics', i. e. demographic data on birth and mortality, which have been subject to state registration for several centuries in most European countries. When compared to long-term mortality data, health surveys among representative or random samples of the population are supposed to provide quick 'comparative snapshots' of 'the population's health'. More than a metaphor, the visual episteme plays a key role in the design and display of health statistics. Alluding to the objectivity effects of photography, Catherine Waldby describes epidemiological surveillance as an imaging process that is conceived to provide "accurate photographs of population health."<sup>4</sup> Graphs, charts and tables visualize and spatialize digital data; they mediate research design, performance and risk communication — as means for presentation and interpretation of public health statistics.

In the following, I will explore how contemporary health surveillance, in particular as conducted at the European level, brings space into existence through data aggregation and information design. As to surveillance, I follow David Lyon's broad understanding of the term as "any collection and processing of personal data, whether identifiable or not, for the purposes of influencing or managing those whose data have been garnered."<sup>5</sup>

### Appendix 3: The European Health Status Module (English version 09-04-03)

#### Introduction

We will now talk about your health. I will start with three general questions before asking you in more detail about your health.

#### (Mini European Health Module)

1. How is your health in general? *Very good, good, fair, bad, very bad*
2. Do you have any long standing illness or health problem? *No, Yes*
3. For at least the last 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been: *Severely limited, limited but not severely, not limited?*

#### (Chronic diseases)

Here is a list of health problems. For each of them can you tell me whether you have ever had them and also whether you have had them in the past year.

Fig. 1: The European Health Status Module (detail, first page)

3 See Armstrong, David (1995): 'The Rise of Surveillance Medicine'. *Sociology of Health and Illness*, vol. 17, 393-404, 397.  
4 Waldby, Catherine (1996): *Aids and the Body Politic. Biomedicine and Sexual Difference*, London, 99.  
5 Lyon, David (2001): *Surveillance Society. Monitoring Everyday Life*, Oxford 2002, 2.

This paper will first describe how 'population health' is constituted as an epistemic object through the collection and display of statistics. I will then proceed by discussing public health monitoring in relation to Foucault's account of Bentham's panopticon as the epitome of surveillance architecture.<sup>6</sup> Drawing on the emerging field of surveillance studies, I will explore the datascapes of European health surveillance in relation to concepts of panopticism and synopticism.<sup>7</sup> What are the dynamics and effects of health surveillance data — in other words, which ways of knowing do such data assemblages<sup>8</sup> bring about and how do they relate to science and politics?

### An effect of surveillance practice: Population health as an epistemic object

Recording data on human populations has a long tradition in demography, government statistics and social policy. In the 19<sup>th</sup> century numerical representation and quantitative inventories of the world became main issues for empirical and observational sciences. This primacy of the numerical — albeit in a different way — co-shapes scientific data collecting and organization until present. Social statistics can be traced back to 18<sup>th</sup> century political arithmetic, in which population thinking, probability theory and the field of political economy were closely intertwined.<sup>9</sup> This constellation of managing a statistically mediated collective 'population body' continues to play a central role in contemporary concepts and practices of evaluation and governance. Quantifying human life is part of the modernist project of inventorying the world — which conceives of quantification as the prerequisite of rationalist acting and 'decision-making' based on the imaginary of complete and precise knowing. While the quantification of systems, performance and processes have remained key to contemporary quality management practices, quantification practices have become more and more distributed due to the rise in computer capacity and the ubiquity of digital media.

Few scholars have used surveillance studies to reflect on public health statistics.<sup>10</sup> In public health, the connotations of the term "surveillance" often differ from those evoked in other fields e.g. CCTV, video surveillance of public spaces, new biometric identification technologies, which are mostly discussed in the context of surveillance studies. With respect to public health,

"surveillance, as defined by Alexander Langmuir, 'means the continued watchfulness over the distribution and trends of incidence through the systematic collection, con-

6 Foucault, Michel (1977): *Discipline and Punish: The Birth of the Prison*, New York.

7 The term "synopticon" was proposed by Thomas Mathieson, see Mathieson, Thomas (1997): 'The Viewer Society: Foucault's Panopticon Revisited'. *Theoretical Criminology*, vol. 1, 215-234.

8 For the term 'assemblage' in the context of recent biomedicine, see Rabinow, Paul (1996): *Essays on the Anthropology of Reason*, Princeton.

9 See Desrosières, Alain (1998): *The Politics of Large Numbers. A History of Statistical Reasoning*, Cambridge.

10 These include: Vaz, Paulo/Bruno, Fernanda (2003): 'Types of Self-Surveillance: From Abnormality to Individuals "At Risk"'. *Surveillance & Society*, vol. 1, no. 3, 272-291; Hassenstab, Christine M. (2007): 'The Inspection House: Panopticism, Gynopticism and Prenatal Genetic Screening'. *Theory & Science*, vol. 9, no. 1 (online journal: <http://theoryandscience.icaap.org/content/vol9.1/hassenstab.html> [last access: 05/03/2008]).

solidation and evaluation of morbidity and mortality reports and other relevant data' for purposes of prevention of disease or injury."<sup>11</sup>

Epidemiologist Alfredo Morabia described surveillance as the "bedrock of public health,"<sup>12</sup> as securing data constitutes the critical issue in epidemiological research.

This statistical mode of studying "the distributions of health and disease in human populations" — is central to the definition of epidemiology adopted by the World Health Organization (WHO). The globalized practice of public health monitoring activities has led to increasing flows of health data, to numerically and digitally guided practices in health research and policy. Health monitoring, surveys and screenings promise access to "what is going on in the population." It is the statistical 'population body' that becomes the epistemic object of health research: Through continuous monitoring of standardized indicators, the 'population body' comes to 'have' certain characteristics which then can be managed and optimized. In an augmented 'representational space'<sup>13</sup> these data constitute epidemiology's epistemic object — population health — which then can be described in quantitative terms, statistically interrogated and the effects of interventions modeled and predicted.

Different from the term 'public' (and 'public health') the term 'population' connects social statistics and social policy to the life sciences: 'Population health' is an entity where the life sciences claim authority as well. In that sense, the population concept connects the realms of social science and demography to the life sciences, including population ecology, physical anthropology and population genetics. The term population health has, however, also been used to deliberately stress the community perspective in a bottom-up mode of knowledge as opposed to central government state-statistics.<sup>14</sup> Thus, 'population health' is the key object of health surveillance, an object referred to from diverse perspectives and points of view. The 'population body' becomes the configuration within which health and disease are negotiated. — 'Population health' is rendered into an epistemic object and this object makes possible biopolitical population governance through the domains of public health, health policy and economy.

Taking up Foucault's notion of spatialization, David Armstrong has coined the term 'surveillance medicine' as "a significant alternative model to hospital medicine and pathology, which emerged during the 20<sup>th</sup> century around the observation of seemingly healthy populations."<sup>15</sup> In particular the practice of probabilistic prediction and the reasoning in risk factors and risk assessment have proliferated in medical research and in the discourse of public health. While hospital medicine spatialized bodies by classifying diseases into nosological categories, sorting them in different wards of the clinic, surveillance medicine creates an augmented space of risk and chance derived from the whole of the population body, but describing the individual body in terms of a probabilistic profile.

11 Halperin, William/Baker, Edward L./Momsen, Richard R., Eds. (1992): *Public Health Surveillance*, New York, xix.

12 Morabia, Alfredo (2000): 'Worldwide surveillance of risk factors to promote global health'. *American Journal of Public Health*, vol. 90, 22–24, 22.

13 See Manovich, Lev (2001): *The Language of New Media*, Cambridge MA and London: MIT; Sick, Andrea (2008): 'Surveillance and political control on the spot.

How zones and space gain existence'. *Thealit Laboratory Do not exist*, Bremen.

14 Labonte, Ronald/Potanyi, Michael/Muhajarine, Nazeem/McIntosh, Tom/Williams, Allison (2005): 'Beyond the Divides: Towards Critical Population Health Research'. *Critical Public Health*, vol.15, no. 1, 5–17.

15 Armstrong 1995: 393.

## Health sciences and the surveillant gaze: the panopticon revisited

As Stuart Elden noted<sup>16</sup>, it was in the context of social medicine and public health — as early as during his work on *The Birth of the Clinic* — that Michel Foucault came across Bentham's panopticon, a spatial concept for prison architecture which he later described in *Discipline and Punish* as an epitome of surveillance. Utilitarian philosopher and social reformer Jeremy Bentham originally envisioned the panopticon as a general spatial arrangement beyond prison architecture. He imagined it as a model for managing schools and hospitals, because it was capable to establish control simultaneously on several levels through a spatial setting: Even the simulation of control would be enough: imagined or real — it is the centralized gaze upon the individual that induces techniques of self-surveillance.<sup>17</sup>

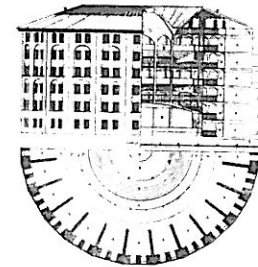


Fig. 2: The panopticon as a spatial arrangement of seeing and being seen<sup>18</sup>

Whereas Bentham saw the panopticon as a model of control for different social settings, Foucault extends his description of the panopticon to a general critique of the scientific gaze.<sup>19</sup> He relates Bentham's architectural arrangement to an 'ideal form' of science as the regime of a controlled panoptic set-up — a machine for social experimentation.<sup>20</sup> It is the enactment of visibility — a control regime that operates through its panoptic arrangement — its spatial setting. Foucault sees the surveillant and spatializing gaze — that renders things into cognitive objects — at work in the experimental research of psychology, medicine and the sciences including social science. It is precisely here — in the study of populations — where the biopower emerges and then transforms human life.

The concept of the panopticon has been applied — with modifications — to studies of digital surveillance technologies: Taking up Jean Baudrillard's understanding of simulation, William Bogard coined the notion "hypersurveillance" to implicate that contemporary surveillance technologies are not only about intensification but also about an imaginary of surveillant control and of pre-surveillance.<sup>21</sup> When it comes to the panoptic characteristics of computer technol-

16 See Elden, Stuart (2003): 'Plague, Panopticon, Police'. *Surveillance & Society*, vol. 1, no. 3, 240–253.

17 The Bentham Project. University College London. <http://www.ucl.ac.uk/Bentham-Project/info/jb.htm> [last access: 05/03/2008].

18 Image source: Wikimedia Commons.

19 Foucault 1977.

20 I develop the notion of quasi-experiments in the population elsewhere, see Bauer, Susanne (2006): 'The population as a laboratory — Epistemic and visual cultures of epidemiology, 1955–2005'. *Yearbook of the Medical Museion*, no. 3, 24–34; Bauer, Susanne (2004): 'Bodies' of Biomedical Knowledge — Environment and Genes in the Epidemiologic Discourse'. In: *CorpoReali-*

*ties. Interventions in an Omnipresent Subject*. Eds. Body Project. Königstein/Taunus, 408–424.

21 Bogard, William (1996): *The Simulation of Surveillance. Hypercontrol in Telematic Societies*, Cambridge, 4: "The prefix 'hyper' implies not simply an intensification of surveillance, but the effort to push surveillance technologies to their absolute limit. That limit is an imaginary line beyond which control operates, so to speak, in 'advance' of itself and where surveillance — a technology of exposure and recording — evolves into a technology for pre-exposure an pre-recording, a technical modulation in which all control functions are reduced to modulations of preset codes."

184

ogy and the practice of statistical correlations, media theorist Mark Poster introduced the term "superpanopticon," in which the subject is constituted in the data structure — multiplied and decentered in the data's "grids of specification."<sup>22</sup> In contrast, Thomas Mathieson proposes a different surveillance model — the "synopticon"<sup>23</sup> — which in particular takes contemporary mass media into account: Different from the panopticon with a central observation tower and one person (or even none) watching the many, in the synoptic mode many people are able to watch the few from decentralized positions. Applied to a reflection on the health sciences, the amount of indicators and variables collected and assembled as a virtual imaginary of population health is continuously proliferating, which might be characterized as hypersurveillance. The proliferation of categories and the continuous refinement of profiling dimensions and multiple statistical dimensions result in spaces brought about by data. Synoptic visions for democratic transparency within science can be found in the increased attention to public engagement, participation and scientific citizenship — as a more robust — "mode2 science"<sup>24</sup> — under development.

Turning the invisible into visibility through the production of representations of different kinds is key to scientific and medical research. In the health sciences, observational systems to record data — "monitoring" — and visualizations of the epistemic object "population health" play a crucial role. The *European Journal of Public Health* presents visual mapping of population health on its emblematic cover page (fig. 3), bringing into being and circulating European datascares.



Fig. 3: *European Journal of Public Health* (cover)<sup>25</sup>

Health data collected from representative or random samples are often visualized using geopolitical maps, in particular in European comparative and policy oriented research. By processing data spatially, the procedure of mapping brings space into existence in terms of datascares shaped by numerical indicators; these are then visually depicted and related to familiar patterns. Their ways of differentiating and marking are co-shaped by political investments, which are reflected in the choice of categories and in the spaces that remain blank. Health monitoring is a tool of objectification; it makes visible trends at a glance when projected onto spatial, temporal or other grids, as performed in European health surveillance practice. Visualizations are used in the communication of quantitative results between science and the policy domain. This mapping of multi-dimensional statistical data results in a dynamic "augmented space,"<sup>26</sup> in which geographic grids are constantly supplemented with layers of more data.

22 Foucault, Michel (1963): *The Birth of the Clinic*, New York.

23 See Mathieson, Thomas (1997): 'The Viewer Society: Foucault's Panopticon Revisited'. *Theoretical Criminology*, vol. 1, 215-234; Bauman, Zygmunt (1998): *Globalisation. The Human Consequences*, Oxford.

24 See Nowotny, Helga/Scott, Peter/Gibbons, Michael (2001): *Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty*, London.

25 *European Journal of Public Health*: <http://eurpub.oxfordjournals.org/> [last access: 05/03/2008].

26 See Manovich, Lev (2002): *The Poetics of Augmented Space: Learning from Prada*. [http://www.manovich.net/DOCS/augmented\\_space.doc](http://www.manovich.net/DOCS/augmented_space.doc) [last access: 05/03/2008].

185

Drawing on the science studies literature, health survey questionnaires — like other research instruments — can be viewed as "inscription devices"<sup>27</sup> positioned in observational arrangements: Inscription devices record the empirical world for modeling; they render the empirical world into a reduced selective representation that can be combined and handled in flexible ways. Within models of the real processes, these data simulate key processes yet in reduced complexity. It is from the regularities such numerical models capture and present that the 'population body' is engineered by interventions which can then be simulated and tested beforehand.

## Health Monitoring: Categories to 'drill down' and indicators to aggregate

In order to understand the moments of panopticism and synopticism in public health surveillance, I will take a closer look at the monitoring practices in international health policy research. As introduced above, it is the 'population' and 'population health' — with outcomes measured and spatialized — which is the object of surveillance technologies and becomes the rationale and the target of governance. Construed as an 'entity', the population can be 'broken down' into layers as denoted by the categories and variables employed in data collecting. Comprehensive data collecting allows, as WHO scientists put it, "to drill down below whole of population level to examine inequalities in health and to estimate the impacts of a given intervention on various sub-groups."<sup>28</sup> It is the availability of data at all levels of the population that allows to 'drill down' and calculate risk estimates for 'causes', specified by 'population groups' — as visualized in the "pyramid of population health measures"<sup>29</sup> (fig. 4). The 'pyramid' illustrates the top-down approach, departing from summary measures (DALY, DALE presented at the top of the pyramid), to single outcome measures and different segments of the population as well as the "causes" and, among them possible targets of intervention.

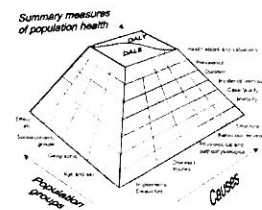


Fig. 4: "The Pyramid of Population Health Measures"<sup>30</sup>

One finds a whole zoo of indicators at different levels of policy — predictors, variables, dimensions and utilitarian measures — used to make statements on population health: incidence and mortality rates, odds ratios, population attributable risks, excess absolute risks and many more. The *World Health Organization* has introduced a number of "summary measures of population health"<sup>31</sup> — such as "disability adjusted life years" (DALYs),

27 For "inscription devices", see Latour, Bruno (1995): 'The "Pedofil" of Boa Vista: a photo-philosophical montage'. *Common Knowledge*, vol. 4, no. 1, 144-187 and — also for "experimental systems" — see Rheinberger, Hans-Jörg (1997): *Towards a Theory of Epistemic Things. Synthesizing Proteins in the Test Tube*, Stanford.

28 Mathers, Colin D./Sadana, Ritu/Salomon, Joshua A./Murray, Christopher J.L./Lopez Alan D. (2000): 'Estimates of DALE for 191 countries. Methods and results'.

*Global Programme on Evidence for Health Policy Working Paper No. 16*. World Health Organization, Geneva.

29 Mathers et al. 2000: 10.

30 Mathers et al. 2000: 10.

31 Summary measures of population health are measures that combine information on mortality and non-fatal health outcomes to represent population health in a single number. See <http://www.who.int/healthinfo/bodsmph/en/index.html> [last access: 05/03/2008].



“disability adjusted life expectancy” (DALE), “quality adjusted life years” (QALYs) to allow for a ‘common currency’. Other measures, such as the “healthy life year,” were introduced because they are considered to be more meaningful to non-technical audiences. Once calculated, these measures are used in political and clinical decision making, in particular when it comes to the allocation of resources and cost-effective management. Rates and risks travel as “immutable and combinable mobiles”<sup>32</sup> — across contexts and are taken up in different domains. Once recorded, data begin a life of their own: Digitally processed and solidified into risk numbers, they develop into a biopolitical currency, often fully compatible with health economy. Most literally a “center of calculation,”<sup>33</sup> public health data networks and registries generate mobile probabilities as virtual representations of the states of affairs in the ‘population body’.

Similar to “hyperreal entities,”<sup>34</sup> the data are bound to the surveillance technologies, monitoring practice and computer software — however with implications for ‘embodied individuals’: Producing data and generating risk assessments adds several ‘reality layers’ to the world — communicated in numerical, visual and textual modes — in an augmented digital space but with reality effects and implications that matter: With the predictive knowledge surveillance medicine generates, everyone is ‘at risk’ to some degree — the healthy can still become healthier and there is always potential for risk reduction when the human body is understood as ‘presymptomatic ill’. In other words, there is always something to be worked on and optimized both on individual and policy levels. Engineering health by risk reduction takes place within arrays of indicators that are used to identify statistical patterns. When policy options are assessed, decision-making is projected into a mode of pre-simulation using the data at hand. Depending on the availability of exhaustive statistics, different scenarios of public health interventions can be simulated and the effects predicted. In this process, they entail reality effects and become points of reference in public debate.

### Diversity in Data: “Harmonization” Dreams versus “Radical Statistics”

Despite the avalanches<sup>35</sup> of new European variables and indicators, the datascapes and recording routines vary considerably across the member states of the European Union. In his account of differences in epidemiological research between European countries in the second half of the 20<sup>th</sup> century, Luc Berlivet recalls an epidemiology lecturer’s remark on a series of Danish research papers during a seminar at the London School of Hygiene and Tropical Medicine in 2002: “In Denmark, you take a seat on a chair in a public place and immediately, there come a lot of sensors which measure a lot of things and the data go directly into a central computer.”<sup>36</sup> Beyond this

32 Latour, Bruno (1987): *Science in Action. How to Follow Scientists and Engineers through Society*, Cambridge, 227.

33 Latour 1987: 232.

34 Jean Baudrillard described similar modes of data processing as “hyperreality.” See Baudrillard, Jean (1988): *Selected Writings*. Ed. Mark Poster, Stanford.

35 Hacking, Ian (1990): *The Taming of Chance*, Cambridge.

36 Berlivet, Luc (2005): ‘Exigence scientifique et isole-

ment institutionnel: L’essor contrarié de l’épidémiologie française dans la seconde moitié du XXe siècle.’ In: Jorland, Gérard/Opinel, Annick/Weisz, George: *Body Counts. Medical Quantification in Historical & Sociological Perspectives*, Montreal, 337. (“Au Danemark, vous vous asseyez sur une chaise dans un lieu public et, immédiatement, il y a tout un tas de capteurs qui mesure un tas de choses, et les données partent directement dans un ordinateur centrale”, translation: SB).

obvious seminar joke, the meticulous registration system of individual data is widely considered a precondition for the success of Scandinavian epidemiology. It is perceived as a privileged situation for research, admired and observed both with envy and with concern in epidemiology communities. In the Scandinavian welfare states, individual record keeping in population registries is rarely questioned and is perceived as a feature of democracy and transparency rather than of state surveillance. Established mainly for purposes of public administration, identification numbers assigned by the central population registry (CPR) allow researchers to “follow the Dane from the cradle to the grave”<sup>37</sup> and are used for studies into all domains of health. Health scientists can download individual data from different registries through record linkage via this identification number.

While central registries and routine record linkage have raised concerns on misuse, state surveillance and protection of personal data in other EU member states, the amount of data stored at the European level has continuously increased: Criminological databases interlinked at European level, electronic patient records, e-banking and e-administration are being implemented in most countries. In flexible solutions they are adapted to the differing regulatory situations: For instance in e-administration plans, sector IDs are discussed in some countries in order to avoid universal identification numbers and, in contrast to the linkage capacity explicitly aimed at in the Nordic countries, thereby technically aimed to *disable* record linkage. It has also been argued that central registries held by Ministries reinforce the executive and disbalance the division of power between executive, legislative and jurisdiction.<sup>38</sup>

Given the diversity of practices with data recording and storing, the buzzword for health statistics at the European level is “harmonization.” Almost as an end in itself, establishing databases and generating comparable figures through harmonization has become a main focus of public health research and policy. This is pushed forward by networks of the *European Public Health Programme*, such as the *Réseau Espérance de Vie En Santé* (REVES).<sup>39</sup> Popular in the research business, acronyms can be telling sources for science studies. — REVES envisions harmonization as a dream of coherence: The vision includes providing “comparable health indicators across the whole of Europe that would address inequalities in the health of European populations.”<sup>40</sup> The ‘monitoring unit’ of REVES is aimed at “the co-ordinated analysis and synthesis of life and health expectancies in Europe [...], providing evidence of inequalities between Member States in terms of health gaps and highlighting potential targets for public health strategies both nationally and on a pan-European level.”<sup>41</sup>

The European ‘harmonization process’ creates a joint space of comparable data; the health equality project tends to turn — at least initially — into the harmonization of procedures to render data comparable — in the EU rhetoric this is described as ‘a first difficult step’. This project of synthesis, however, lays the ground for establishing difference on two levels: difference

37 Olsen, J. H./Mellemkjær, L./Friis, S. (2004): *Fra kræfttælling til Cancerregister. Ugeskrift Læger*, 166 (15/16), 1458–1459.

38 Parycek, Peter (2006): ‘Staatliche Informationsgebarung — Gläserne Bürger im gläsernen Staat?’ Paper presentation, 6. österreichische TA Konferenz, Vienna, 05/29/2006.

39 Eurostat/WHO (2004): Working paper No.16 at the Joint UNECE/WHO/Eurostat meeting, Geneva, 24–26 April 2004, <http://www.uncece.org/stats/documents/ces/ac.36/2004/wp.16.e.pdf> [last access: 05/03/2008].

40 Eurostat/WHO 2004: 1.

41 Eurostat/WHO 2004: 2.

within this space to re-negotiate the internal distribution of risk and wealth — and difference between the included and excluded from the common space. Harmonized joint data collecting actively builds a common space — in which differences are made visible and monitored as 'diversity'.

Similar to how stock market trends are reported, data in the health sector are collected in order to assess trends and to predict the yet unknown, based on large numbers of data. The paradigm of surveillance entails a need for ever more data, better compatibility and comparability — and constitutes a European space as one of joint surveillance. In evidence-based policy, knowing demands the recording of data that fulfil the evidence-criteria — once complying with these standards, the figures become indisputable. In *The Politics of Large Numbers*, Alain Desrosières explores why statistics are conceived indisputable, in terms of stating the factual by bringing order into the chaos of singular events. Tracing a "double path,"<sup>42</sup> he describes two distinct characteristics or 'tools' inherent in the term statistics — a politico-administrative, descriptive means and a cognitive technique to summarize the complex into something that becomes manageable. Statistics are situated in between the spheres of scientific description or analysis and policy action. Yet, at the same time, following Desrosières, "statistical tools have helped to fashion a public sphere."<sup>43</sup> Social statistics can open a space for articulation of otherwise invisible relations and provide reference points for public debate. Beyond their surveillance character, statistics can be viewed as rendering social relations into political issues and bringing them into the realm of public discourse.

Statistics can be used not only in a top-down mode of governance but also in a bottom-up way. NGOs and local initiatives, if they want to make an impact, strategically situate their agenda in the very framework of quantitative epistemologies and argue with statistics. The data assemblages and information networks themselves are sites of contestation, where categories and techniques are negotiated in a larger biopolitical context. This can be seen in some efforts to bring to public debate the conditions of social statistics and to analyze and disrupt the panoptic character of surveillance from below — by using statistics differently in order to challenge mainstream interpretations and negotiate niches through local tactics. Critical statisticians and social scientists organized in the *Radical Statistics Group* in Britain "believe that statistics can be used as part of campaigns for progressive social change."<sup>44</sup>

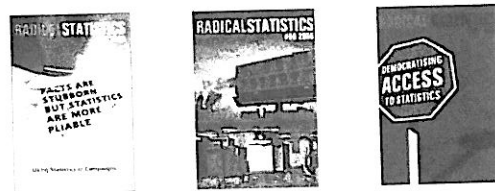


Fig. 5: *Radical Statistics*<sup>45</sup> (journal covers)

42 Desrosières 1998: 326.

43 Desrosières 1998: 324.

44 Webpage of *Radical Statistics*. <http://www.radstats.org>.

[org.uk/](http://www.radstats.org.uk/) [last access: 05/03/2008].

45 *Radical Statistics Journal*. <http://www.radstats.org.uk/journal.htm> [last access: 05/03/2008].

Their strategy is to use statistics for political articulation, to create visibility for conditions that otherwise remain invisible and to point to ideological, political and personal biases in quantitative knowledge. Recent examples from the context of the Britain-based *Radical Statistics Group* include developing a critique of government statistics on health and ethnicity, of official measures for homelessness or of the assumptions in migration statistics. In other instances the group analyzed government spin through the production and reporting of statistics. Such informed critique can disrupt the seemingly closed circuits of techno-logic calculations and open up for more bottom-up modes of knowledge generation and critique. Producing and using statistics as means of argument in an open and negotiable sphere however remains restricted to state agencies, large companies and well-networked NGOs. This is because the capacity to produce or challenge statistics and to de/stabilize statistics-based factual claims heavily depends on resources and infrastructures, even if the statistics (here: the descriptive numbers) are publicly available.

A paradox resides in much of social statistics — and this ambiguity is worthwhile further exploration: On the one hand statistics render formerly invisible relations into a public sphere where they can be debated and contested.<sup>46</sup> On the other hand they require categorization that is defined and makes up the terms of governance, with the effect of stabilizing these categories into standards and quasi-factual political currencies.

### Transparency or surveillance? Health databases between panopticism and synopticism

Public health statistics can be viewed as flexible "surveillant assemblages,"<sup>47</sup> in which data from different contexts are brought together and continuously monitored for the purpose of health policy. As explored in the last paragraph, these biopolitical assemblages of health surveillance data are open to reconfiguration and to different strategies.

In data politics and in social statistics in a broader sense, two, almost mutually exclusive, strategies are at work: One is engaged in questioning and deconstructing the classifications, while a second one is busy generating new and improved categories to render visible those previously left out from categorization. Thus, it is also the surveillant data assemblages themselves that constitute the site of politics. — In this sense, politics operate through the augmented space of datascares. Political practice then involves the contestation of numbers and the production of more and better data, as debated for example with respect to the production of data on marginalized 'minorities'. This double effect of statistics also plays out in the discussion of medico-social surveys: On the one hand, producing data on health differentials and classifying 'minorities' can result in stigmatization.<sup>48</sup> On the other hand it can be perceived as a political scandal, that no

46 See Desrosières 1998: 324.

Surveillant Assemblage'. *British Journal of Sociology*, vol.

47 Haggerty, Kevin D./Ericson, Richard V. (2000): 'The

51, no. 4, 605–622.

data are available that allow the monitoring of health inequalities. In the latter view, it is the governments' duty to produce data on those who are marginalized, in order to render visible social issues. In a similar way, health surveys that would target those previously un-surveyed — for instance migrant women or children — are called for in the context of social policy.

Practices with data can work both as projects of transparency or of surveillance. Sociologists studying contemporary surveillance<sup>49</sup> point to the increasingly distributed forms of surveillance in the digital age. Surveillance has increasingly acquired synoptic traits of distributed, sometimes even bottom-up activities. Even if produced in a panoptic set-up of centralized data generation such as in health surveillance, the data are increasingly available and negotiable to the public. As Paulo Vaz and Fernanda Bruno<sup>50</sup> emphasize, it can as well be those groups targeted who support and encourage surveillance practices or adopt the surveillant gaze.

Yet, both effects of public health data assemblages — transparency and surveillance — share common features and synoptic and panoptic practices may as well intersect or fusion in "surveillant assemblages."<sup>51</sup> When looking at the practice of knowledge production in medico-social surveillance, there are panoptic elements which persist despite the synoptic characteristics of the increasing public access of statistics. The survey of risk attitudes conducted by Eurobarometer<sup>52</sup> can serve as an example of how panoptic inspection of public attitudes intersects with increasing interest to participant's views. Opinion polls conducted by Eurobarometer record and map 'concerns' across European member states, anticipating, preventing and channeling (and sometimes replacing) political debates before they occur. This enhanced practice of surveying attitudes across member states — results in a visualized European profile of 'top concerns' (fig. 6). In this context, surveys constitute panoptic instruments, screening the worries of the many — as a geography of population concerns — for inspection by the few spin doctors and accountable 'decision-makers'.

In health surveillance and risk issues, attitudes of the larger public are often addressed in terms of 'risk perception'. Here, participation appears somehow anticipated and 'simulated'. Research in this domain operates rather in the logic of spin-doctoring: Surveys conducted at the European level include such on the public's opinion on health concerns and worries on general risks — monitoring attitudes towards risks.

William Bogard has called the virtual spaces and imaginaries "social science fiction" with simulated surveillance and an "imaginary of surveillant control."<sup>54</sup> As to scientific citizenship, this 'imaginary of surveillant control' of governance might be complemented by an 'imaginary of

48 While Bentham's panopticon epitomizes discipline and social control, it was at the same time aimed at rehabilitation. Supposed to induce the desire of the subjects to improve their lives, control is intertwined with aspects of care from the very conceptualization of the panopticon and Bentham himself already thought of the model as something of use to hospitals and schools (See The Bentham Project, University College London. <http://www.ucl.ac.uk/Bentham-Project/info/jb.htm> [last access: 05/03/2008]).

49 See e.g.: Bauman, Zygmunt (1998): *Globalisation. The Human Consequences*, Oxford; Lyon 2001, Mathiesson 2000.

50 Vaz/Bruno 2003.

51 For an analysis of how panoptic and synoptic gazes work together, see Hier, Sean (2003): 'Probing the Surveillant Assemblage: On the Dialectics of Surveillance Practices as Processes of Social Control'. *Surveillance & Society*, vol. 1, no. 3, 399–411.

52 Eurobarometer (2006): *Risk Issues*. Special Eurobarometer no. 238.

53 Eurobarometer 2006: 29.

54 Bogard 1996: 4.

### Top Concerns in each Member State

Question: 5. For each of the following issues, please tell me if you are very worried, fairly worried, not very worried or not at all worried by it.

Answers: WORRIED

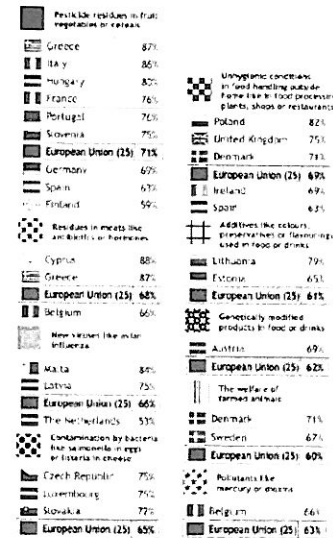


fig. 6: A geopolitical map of "top concerns"<sup>53</sup>

participation'; population governance is fine-tuned, justified and accounted for based on survey data in 'evidence-based policy'.

Similar processes can be identified for the realm of research as well: Moving from issues of governance and taking a look at the scientific knowledge production, there are parallel stakes in the notion of "mode2-science"<sup>55</sup> in science policy studies. This approach could be described as working towards a change of traditional panoptic science into a more participatory mode, by turning it into a more democratic synoptic model. The citizen's role in such participatory knowledge production — as actively contributing and engaging in the shaping of science and politics — has been framed in terms of "scientific citizenship."<sup>56</sup>

Far from how mode2-science proponents envisioned participation as an engagement with science in the making, space for discussing basic principles and categorizations is rare in questionnaires and for survey participants. Channeled through surveys — a randomly selected participant-responder has the options to either become a data-contributor, or, if refusing to participate, a 'missing value' to the big picture.

55 Nowotny et al. 2001.

56 Nowotny et al. 2001.



In the very practice of health surveillance and in the statistics and visuals produced, there is an absent presence of the political — from the very categorizations at work in the production of statistics and of visual representations to the spaces of interpretation in the use of statistics. Analyzing this absent presence can reflect and challenge cultures of 'evidence-based policy' and decision-making in the augmented data space brought about by monitoring.

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Sexual Difference and the Case of *Aufhebung*

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**Tanja Zimmermann:** 133  
Rituals of (Un)veiling: Orientalism and the Balkans

155	<b>Renate Lorenz/Pauline Boudry/Brigitta Kuster:</b> Copy me — I Want to Travel <i>Including: 'Transformative Translations: Cyrillizing and Queering' by Katrin Pahl</i>	<b>Angela Sanders (with Ursula Biemann):</b> Female Itineraries within the Spanish-Moroccan Borderlands: <i>Europlex and Domestic Scapes</i>	333
177	<b>Andrea Sick:</b> How Space and Zones Gain Existence: Surveillance and Political Control on the Spot	<b>Anna Daučíková:</b> <i>Traces of Malholandrajv and The Thing</i>	345
189	<b>Susanne Bauer:</b> Transparency or Surveillance? The Datasapes of European Public Health Statistics	<b>Shirin Homann-Saadat:</b> On Building Boxes and Telling Stories. Samples from the Artist Talk	351
205	<b>Susanne Tönsmann:</b> Documenting Existence: Citizen's Passports and Non-Citizen's Passports	<b>Christine Kriegerowski/Christoph Tempel:</b> GATED COMMUNITY — Umzäunte Gemeinschaft	361
217	<b>Christine Hanke:</b> The Epistemic Space of the Visual: Statistics, Astronomy and Nanospace	<b>Maja Linke:</b> <i>Montotypen / Monotypes.</i>	375
233	<b>Ivika Kivi:</b> Surveillance — Welcome to Estonia! — Privacy does not exist in Estonia	<b>Olga Mink:</b> "We need to train ourselves to dissect, analyze and discover reality". On <i>Urbanskies</i> and Open Spaces	389
243	<b>Christine Blaettler:</b> The Virtue of Similitude	<b>Helene von Oldenburg:</b> No Signal	393
255	<b>Ulrike Bergemann:</b> An Empty Fortress. The Museum of Europe in Brussels	<b>Irena Paskali:</b> On the Way to/from Macedonia	403
287	<b>Kea Wienand:</b> Primitivist Fantasies: 'The East' — 'the Indian' — 'the Healing'	<b>Mona Schieren:</b> É C A R T	407
299	<b>Audronė Žukauskaitė:</b> Vanishing Identities in Contemporary Lithuanian Art	<b>SCHLEUSER.NET:</b> License to Demobility	413
	<b>Exhibition: [open] spaces states of political and media space exhibited</b>	<b>Hanna Smitmans:</b> <i>Avrouwen. Awomen</i>	421
313	<b>Claudia Reiche/Andrea Sick:</b> Opening [open] spaces	<b>Rena Tangens/padeluun:</b> FoeBuD Offline Shop @ [open] spaces	427
321	<b>Silvia Biagi/Simona Forconi:</b> A Journey into the Inhabited Gardens of Rome	<b>Sonja Vuk:</b> <i>Cosmoclub</i>	435
		<b>Notes on Contributors</b>	443