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The Media of Sociology: Tight or Loose Translations?

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Abstract:

Sociologists have increasingly come to recognize that the discipline has unduly privileged textual representations, but efforts to incorporate visual and other media are still only in their beginning. This paper develops an analysis of the ways objects of knowledge are translated into other media, in order to understand the visual practices of sociology and to point out unused possibilities. I argue that the discourse on visual sociology, by assuming that photographs are less objective than text, is based on an asymmetric media-determinism and on a misleading notion of objectivity. Instead, I suggest to analyze media with the concept of translations. I introduce several kinds of translations, most centrally the distinction between tight and loose ones. I show that many sciences, such as biology, focus on tight translations, using a variety of media and manipulating both research objects and representations. Sociology, in contrast, uses both tight and loose translations, but uses the latter only for texts. For visuals, sociology restricts itself to what I call “the documentary”: focusing on mechanical recording technologies without manipulating either the object of research or the representation. I conclude by discussing three rare examples of what is largely excluded in sociology: visual loose translations, visual tight translations based on non-mechanical recording technologies, and visual tight translations based on mechanical recording technologies that include the manipulation of both object and representation.

Key Words: Actor-Network Theory, Visual Sociology, Sociology of Sociology, Sensory Ethnography, Sociology of Translations, Science and Technology Studies.

Introduction: Sociology and its media

What are the media of sociology?¹ How does sociology transform its objects into research results?

A short glance at any sociology journal shows that most articles consist predominantly of text, some statistical graphs, a few tables and maybe a theoretical diagram. Then, there are the specialist journals for ‘visual sociology’ that contain mostly documentary photographs. Further, invisible in articles,

some scholars use audio-recording to capture speech and transform it into text. When we compare this situation with other disciplines, such as biology, astronomy or chemistry, where all kinds of technologies are used to represent the world, from drawing, to computer models, from complex machines visualizing things very big and very small; to transform smells or heat into visual traces, it becomes apparent how unusual this situation is. It is true that in the last two decades almost anything has become an *object* of sociology, including the senses, their materiality and their relationship to the body (Pink 2009). However, this research has largely been confined to using text as the research device, with the occasional support of photographs. But sociologists do not make use of these senses, and different devices to research and represent their objects of research.

In this article, I want to analyse this situation and offer some options for exploring traditionally excluded ways of engaging different media. The impetus for doing so comes from a double background. Firstly, the sociology of the sciences has paid close attention to the role of different kinds of media and instruments in research in the natural sciences (Jones and Galison 1998; Lynch and Woolgar 1990; Pauwels 2006; Grasseni 2009). STS has shown that elaborate instruments and media are central for the production of facts. But such an analysis has rarely been performed upon sociology, and, sociologists have hardly ever incorporated these analyses for their own practice. In short: Sociology has shown that in other disciplines complex technical devices help produce facts, while the fact production of our own discipline remains largely unexamined and falls short of what can be learned from these studies.

Second, in recent years a few attempts have been made to rework sociology in different media and to take up sociological questions in exhibitions (Latour and Weibel 2005; Macdonald and Basu 2007; Meyer 2009). These projects have often been experimental and marginal, but they open up new avenues for research and they should be analysed in detail, thereby becoming models for future research. My goal here is not so much to review these attempts, but to analyse some of the obstacles these projects face within the field of sociology.

My argument develops as follows: Focusing on the specific case of visual sociology, I will first present two discourses on the media of sociology. I shall demonstrate in the second section that both are based on an asymmetric media determinism and the idea that non-interference provides objectivity. In the third section I offer the suggestion of using the concept of translation to circumvent these two fallacies and I suggest some distinctions among different kinds of translations. In the fourth section I will show that the natural sciences mostly rely upon tight translations that involve the manipulation of both the object and its representation. In the fifth section I will show that tight translations within sociology are mostly used with texts but rarely with images. Sixth I continue by showing that the use of photography within visual sociology, despite its reliance on technologies of mechanical representation does not produce tight translations but rather mimesis or what I call the 'documentary'. Next, I introduce the concept of loose translation to characterize some research practices in the social sciences such as ethnography. In the final section I discuss three forms of engaging with media that are missing from within sociology: First, Abraham Bosse's theoretical drawing of the Leviathan as an example of a visual loose translation; second the gesture research of David Efron based on drawings of Stuyvesant van Veen as an

example for non-mechanical forms of representations within tight translations; and third the research of Bernd Kräftner, Judith Kröll and Shared Inc. that uses computer operated photography to research vegetative state patients as an example of visual tight translations.

1 Two discourses of visual sociology

Before I embark on my travels through the media of sociology, a note on more familiar discussions taking place within ‘visual sociology’ is in order (for a systematic overview see Pauwels (2010)). I will do so by briefly reviewing firstly the history of the absence of non-textual media from sociology, and secondly the response of visual sociology to this exclusion by pointing out two modes of visual sociology that are both defined by their relationship to objectivity. I limit my analysis here to the use of photography, since this is the primary medium of visual sociology.²

The exclusion of imagery from sociology is a continual complaint and a *conditio sine qua non* of the existence of visual sociology, and the very existence of this subdiscipline is testament to this strange relationship. Compare this situation with other disciplines: A ‘visual astronomy’, for example, does not exist. This is not because of an absence of images, but because visualization is so much part of the discipline that there is no need to indicate it as a methodological tool.

The problem in sociology dates back to the beginning of the discipline itself. As Candice Szasz has shown, photographs were regularly used in the American Journal of Sociology until around 1915 (Szasz 1979). Their appearance was part of the practice of reform-oriented research projects that used them to demonstrate the living conditions of poor people. Szasz shows that when photographs started to disappear shortly thereafter, this was due to a shift towards a more ‘scientific’ sociology, whereby taking photographs was identified with (the often female) social reformers, who were seen to taint the purity of the discipline. For Szasz, this shift is exemplified by Albion Small, as editor of the American Journal of Sociology, who pushed in the 1910s the idea that sociology should be ‘a pure science’, focusing on statistics, rather than on photographs. But equating statistical graphs with science and photography with non-science is, as I will show below, both media-deterministic and deeply problematic.

Only since the 1970s have photographs reappeared, but now as a subdiscipline existing at the margins, this remaining true until today: ‘Sociology remains essentially uninterested in visual culture or visual methods’ (Harper 2000: 730). This basic constellation, the visual exceptionalism of sociology, has not significantly changed since Small’s time. The idea that the use of photographs, let alone the use of other media such as drawings, betrays a lack of scientific rigour still holds true. Since Small, visual media are thought of as categorically different from texts and statistics, both by the critics and the defenders of visual sociology.³

Since this early displacement of photography, sociologists have produced a complex discourse about objectivity and media, which is shared by visual sociologists and their critics. The discourse is mostly a discourse *by* visual sociologists that ascribes *orthodox, hegemonic* sociology a certain anti-visual

stance. Visual sociologists need to imagine this hegemonic position, because orthodox sociologists rarely explicitly express this scepticism against other media (see for example Prosser 1998: 104–5). In the following, I reconstruct this discourse by analysing programmatic texts from seminal visual sociology volumes and handbooks. This presentation is necessarily simplified, but my goal here is to point to some widely shared assumptions, rather than to give an overview of a diverse and fractured field. Also, this literature of course contains many unique, differing voices, who do not conform to the discourse indicated below. Most prominently, Howard Becker would like to annex any form of ‘telling about society’ as sociology, independently of the media used (Becker 2007).

The proponents of visual sociology employ two different strategies (for a similar distinction see Wagner 2001): The first shares with orthodox sociology the belief that non-textual media are inherently problematic and need to be handled with utmost care to allow at least a minimal standard of objectivity. The second rejects notions of objectivity and turns the weakness of images into an asset, as it allows for subjectivity, political action, and reflexivity.

Both of these views start with the imagining of the orthodoxy approximately as follows: Text and even more so calculation and statistics are considered to be unproblematic and scientific, ‘because ‘science’ in sociology came to be defined as objective and neutral’ (Becker 2007: 191). As observed by Mike Savage, the underlying notion of ‘science’ was not aimed at the descriptive, as in natural science, but focused on causality (Savage 2009), and visual media are bad for establishing causality (note that given the ubiquity of images within seemingly more scientific disciplines that share a concern with causality such as physics, chemistry and biology, this idea of orthodox sociology is rather odd). Photographs, and other non-textual media, are then not scientific but have other unique and problematic, powers.

The biggest problem from this viewpoint is that photographs *purport* to be objective: A ‘fallacy about photography is that it is simply and universally accessible to everyone in the same way’ (Loizos 2000: 96). This is seen as dangerous because they are not, and are likely to be freely interpreted, or as Howard Becker jokingly writes, they are ‘heaven forbid, ‘art’ (Becker 2007: 287). Photographs are thought to have the unique power to speak to lay people and to elicit strong and direct emotions from viewers: visual materials add ‘drama and life to an account of concepts’, and ‘it is refreshing to students, because it captures and embodied expression, not abstract truisms’ (Spencer 2011: 33). In the view of critical visual sociologists this explains why ‘the books most professors use for first courses... are filled with colourful, uncomplicated images’ (Harper 2000: 730).

The fallacy of objectivity, and its attendant belief in the capacity of images to rouse emotions, is seen as dangerous because it can mislead. Sociologists thus need to remind themselves that ‘images are not neutral and do not portray the truth but only the producers’ and viewers’ co-constructed understanding’ (Holm 2008: 325). The problem behind this purported objectivity, which is in fact subjectivity, is the disguised producer and manipulator of the image: ‘The researcher always has a hand in setting up the parameters’ (Holm 2008: 326). To operate the camera amounts to manipulation; it is a deception to believe that ‘the camera never lies’ (Winston 1998). These visual sociologists point out

that images can be easily faked: 'In a film or video, skillful editing can remove spoken words from a sentence All these manipulations are hard for the untrained eye to detect' (Loizos 2000: 95).⁴ To maintain the objectivity of images, photographers should not 'influence what is taken', because this 'might make the photographs more subjective and provide an inaccurate record of artifacts' (Holm 2008: 328).

What differentiates the proponents of visual sociology in the first camp from orthodox sociology is that the former believe that if only enough care is taken, if the photographer does not allow for his subjectivity to emerge, if she abstains from manipulating the image, and if the viewer is made aware of the pitfalls of interpretation and of the dangers of falling to the emotional lure of images, the problem of a lack of objectivity can be overcome.

Within visual sociology, there is a second position, which basically turns all these dangers into a quality, specific to visual and other forms of sensory research: The proponents of this position believe that visual and other media 'are not read, they are experienced' and thus 'are accessible to much broader audiences' (Leavy 2008: 344). This is why they are specifically appropriate for 'consciousness raising, awareness, empowerment, emancipation' (Leavy 2008: 344). A related version posits that each picture is but one *interpretation* of reality, a fact that visual sociology should celebrate. It should leave interpretation open to the viewer, or better, in a reflexive mode; make the viewer aware of this multiplicity (Pink 2009: 49 ff.). Another option is to engage in photo-elicitation, because here, the photograph 'loses its claim to objectivity ... and unlocks the subjectivity of those who see the image differently from the researcher' (Harper 2000: 729). In short, the second variety of visual sociology believes the orthodox discourse of objectivity is mistaken, and other media are suitable precisely because they allow for subjectivity and a more dialogic and emotional rapport with the objects of sociology.

2 Two problems of the discourse on visual sociology: Asymmetric media determinism and objectivity as non-interference

All positions within this discourse, the orthodox as well as the first and the second version of visual sociology, share some tenets, and a set of terms, to talk about sociology and its media. First of all, they hold to an *asymmetric media-determinism*. They share the idea that textual media are non-determinist, while other media are determinist. These positions take for granted that the medium of text is not the cause for the difference in objectivity vis-à-vis reader response, and in the way the text should be interpreted between a theoretical treatise, an ethnography, a book based on survey research, a thriller and avant-garde poetry. Neither the critics nor the defenders of visual sociology have a problem accepting that Flaubert's *Madame Bovary* and Talcott Parsons' *The Structure of Social Action* share the same medium of ink and paper, but produce quite differing relations to the world, both with respect to who their audiences are, how objective or subjective they are and how they reach the reader as an emotional or rational being. Few warn of the potential for 'The Structure of Social Action' to provoke emotional reactions, because it is made of ink and paper.

But all participants in the discourse on visual sociology assume that such differences do not exist in other media, and specifically, that visual media are

inherently problematic and *intrinsically* produce this or that kind of objectivity, this or that kind of relationship to the audience (Prosser 1998: 107–8).

Second, all these discourses share a concern with ‘objectivity’. They think that objectivity, often without specifying what it means, is produced by machines but hampered by people, whose interference automatically leads into subjectivity and the domain of ‘art’. Drawing, a medium rarely discussed in these discourses, is therefore out of the question as a medium for visual sociology, because it is more ‘art’ than photography. Thus for proponents of visual sociology version 1, the camera is good because it allows for objectivity as long the researcher does not manipulate either the object or the image; if not, the result is subjective and therefore not science. For the proponents of version 2, objectivity is bad but visual sociology is good because of the *inherent* power and subjectivity of photography. But even proponents of version 2 accept that the manipulation of the object and the image is bad and they seem to accept that manipulating images, even though they favour ‘subjectivity’, hampers social science. What the positions share is that they connect objectivity, or being scientific in a more general way, with non-interference.

3 Setting the stage: Translations

In what follows, I wish to explore the possibilities that are obscured by this discourse. To do so, I propose to leave the asymmetric media determinism and become non-determinist for all media alike. I also suggest bracketing the problem of objectivity versus subjectivity and replacing it with the basic concept of translations. The switch from objectivity to translation allows for two things: First, as I show in this section, it allows us to stop confusing non-interference with objectivity and becoming more scientific. By comparing the use of media in different disciplines I show that in other disciplines such as biology, what I call *tight translations* occurs, meaning that interference and the use of non-textual media *enhances* objectivity. Secondly, it then emerges that current modes of visual sociology neither follow the model of tight nor the model of loose translations, but what I call ‘the documentary’. Thirdly, in the following section, I show that sociology knows another mode, but only for textual media, namely *loose translations*. I will then argue that sociologists could (re-)establish new forms of sociology by not only engaging with the documentary, but by exploring both tight and loose visual translations.

I propose drawing here upon research in Science and Technology studies and specifically of Actor-Network Theory, or what is recently called the Sociology of Translations. The sociology of translations is helpful here because it allows comparing different forms of producing knowledge in different disciplines, without buying into an existing discourse of objectivity. The concept of translation describes in the classic formulation of Michel Callon ‘to displace’:

‘But to translate is also to express in one's own language what others say and want, why they act in the way they do and how they associate with each other; it is to establish oneself as a spokesman.’ (Callon 1986: 203).

A translation brings actors together; it ‘induces two mediators into coexisting’ (Latour 2005: 108). In the case of (social) science, this usually implies a (social) scientist and an epistemic object, it is here that translation implies a form of practice that changes the object (and the researcher).

ANT scholars have endeavoured to describe such translations in a variety of fields. Indeed, a central advantage of the concept of translation is that it makes it possible to observe differences in research practices without making a priori distinctions either between the natural sciences and the humanities, or between nomothetic and idiographic disciplines. Translations occur by drawing a specimen, producing a PCR sample, audio-recording an interview with an informant or writing a theoretical article. In all these cases a researcher establishes herself as a spokeswoman for an object by transforming it into a different medium. The notion of translation displaces the notion of objectivity understood as non-interference, because it always assumes interference and acknowledges that the researcher has a practical involvement in this transformation with her own body and various media-technologies.

From the above selective description of various research practices, it becomes obvious that these different examples can all be understood as instances of translations. Describing all these research practices as sequences of translations highlights the transformative nature of research, but it also tends to conflate important differences. Surely, the translations involved are not all the same? I propose here, in addition to the generic idea of translations, some distinctions to analyse how these research practices differ from each other. I sometimes place these distinctions below as binaries for reasons of expedience, but obviously they should be thought of as continua.

a) There are bigger and smaller translation jumps that I would like to call *tight* and *loose translations*. Tight translations are translations where many translations transform an object step by step. In each step, one feature of the object is translated into something else, and this translation is accounted for with a suitable medium. Tight translations very often include a variety of media and recording technologies, and jumps between different media, because to account for a translation step necessitates a *suitable medium* that makes the translations accountable. The quantitative (the amount of steps) go hand in hand with the qualitative (the problem of accountability). Each shift from one medium to another necessitates a precise interpretation of what these steps do. Some of these translation steps may also be 'black-boxed' (Latour 1987: 81), that is delegated to machines, as for example when texts are automatically coded, or images are colour coded by computers. By contrast, loose translations are translations where an object is translated in only a few large steps, where many of the jumps between different media are not accounted for.

b) We can distinguish different forms of media or recording technologies: There are mechanical forms, such as the PET-scans, photo- and videocameras, x-ray cameras, audio recording and artificial noses. In extreme cases, these recording devices are even computer operated. On the other hand there are less mechanical forms such as drawings, note taking from memorized smells and visual observations or transcribing sounds by the ear. For lack of a better phraseology I call these non-mechanical recording technologies.

c) We can distinguish whether the objects *of research* are manipulated by the researcher. Researchers may collect and cut up plants; they may make mice walk over a ladder or they may ask humans to do specific tasks or answer questions. Or researchers can refrain from manipulating their objects and only

listen to or watch them, as in the case of ethnography or naturalistic observation.

d) Researchers can manipulate *representations* of research objects: They can change the colours and the shape of the image and they can draw things together. They can cut audio-recordings or code or rewrite excerpts of texts. Or they can refrain from doing so and use the representations as they are, trying to keep them in their initial state.

These four distinctions form the columns of table 1. The remainder of this article discusses how different kinds of research fit these distinctions.

Insert Table 1 about here

Here I wish to make a few remarks on these distinctions. First, note that the word manipulation is used here simply to indicate that researchers are intervening. It does neither denote a value judgment about specific research practices nor whether these practices are scientific or not. Different (sub-)disciplines have different moral and political notions of how and whether to manipulate research objects and representations, but in this article I do not advocate for any of these valuations. Second, these distinctions are not strict binaries, but form a continuum. As the concept of translation implies, there is no representation without manipulation. Furthermore, within a single research project, different forms of media may be used, different kinds of translations may be undertaken and both objects and representations may be manipulated in different ways. There may be pure versions of research that perform translations either in one or the other extreme way, but many research projects combine different forms of translations. Crude as these distinctions are, they shall serve to indicate extremes of a continuum, because without such an indication it becomes difficult to understand the practice of sociology and compare it to other disciplines. Also, logically (and as I will show: empirically), these distinctions are independent of each other. It is possible to combine tight translations with mechanical or non-mechanical forms of representations, and for both mechanical and non-mechanical forms of representations it is possible to manipulate or not manipulate the object.

Let us look at some examples, in which different kinds of translations are at work. I discuss here what I take to be typical examples from various (sub-)disciplines, but knowing fully well that disciplines are rather heterogeneous when it comes to their media practices.

4 Tight translations: making the invisible visible

I begin with an example of tight translations based primarily on non-mechanical recording technologies.

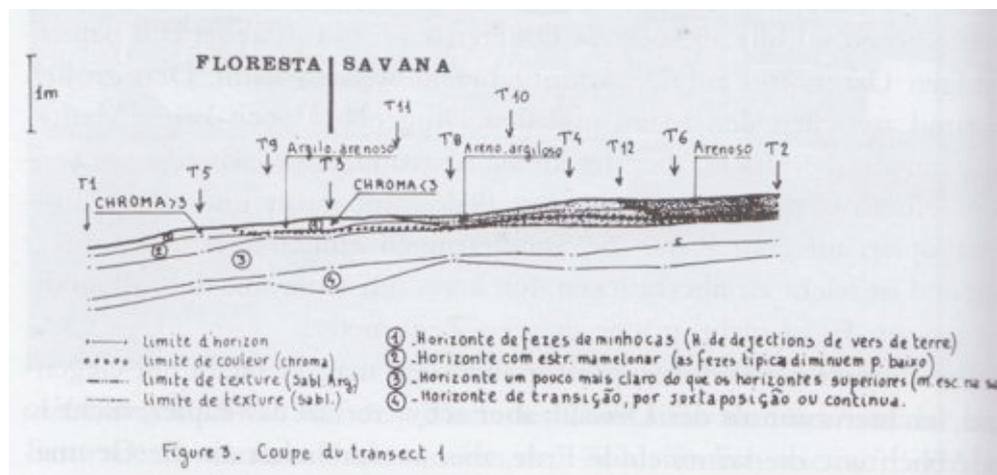
The example is a canonical study of biological field research by Bruno Latour, in which he introduces the very concept of translations (Latour 1995, table 1, column 1). He describes how researchers in the Amazon try to establish where the border between forest and savannah runs and which of them is retreating. The researchers seek to establish whether certain tree species at the border of the forest are proof of the advance or of the retreat. They number the trees and register them on a map of the region. Certain plant species are sampled, collected and dried. The plants can now be shuffled around and brought into

an order. Back in the field, soil profiles are produced with basic geometrical tools and these are drawn onto paper. The so-called Pedofil, a cotton yarn on a bobbin, whose length is measured when it rolls off, comes to be used to measure the distance between individual trees. The scientists then also take soil samples. Finally, from all these operations emerges a drawing, one which shows a vertical cut through the forest and soil that shows the place where forest and savannah meet.

[Figure 1 about here]

Figure I: *Drawing of Forest/Savannah Border*

Source: Latour (1995), with permission from Bruno Latour.



Thus a number of translations occur, from different objects into different media: trees are translated into numbers; soil is translated into values of different chemical compounds; and tree distances are translated into meters with the use of the pedofil. Finally, all these measurements are translated into a drawing. As indicated in column one of the table, this is an instance of tight translation, because a great number of translation steps are involved. The translations are based on non-mechanical media (drawing) and they heavily involve the manipulation of the research object (digging, collecting samples) and the manipulation of the representation: Drawing as a non-mechanical medium can only represent by manipulation, which is precisely why it is suspect to those who believe in objectivity as non-manipulative.

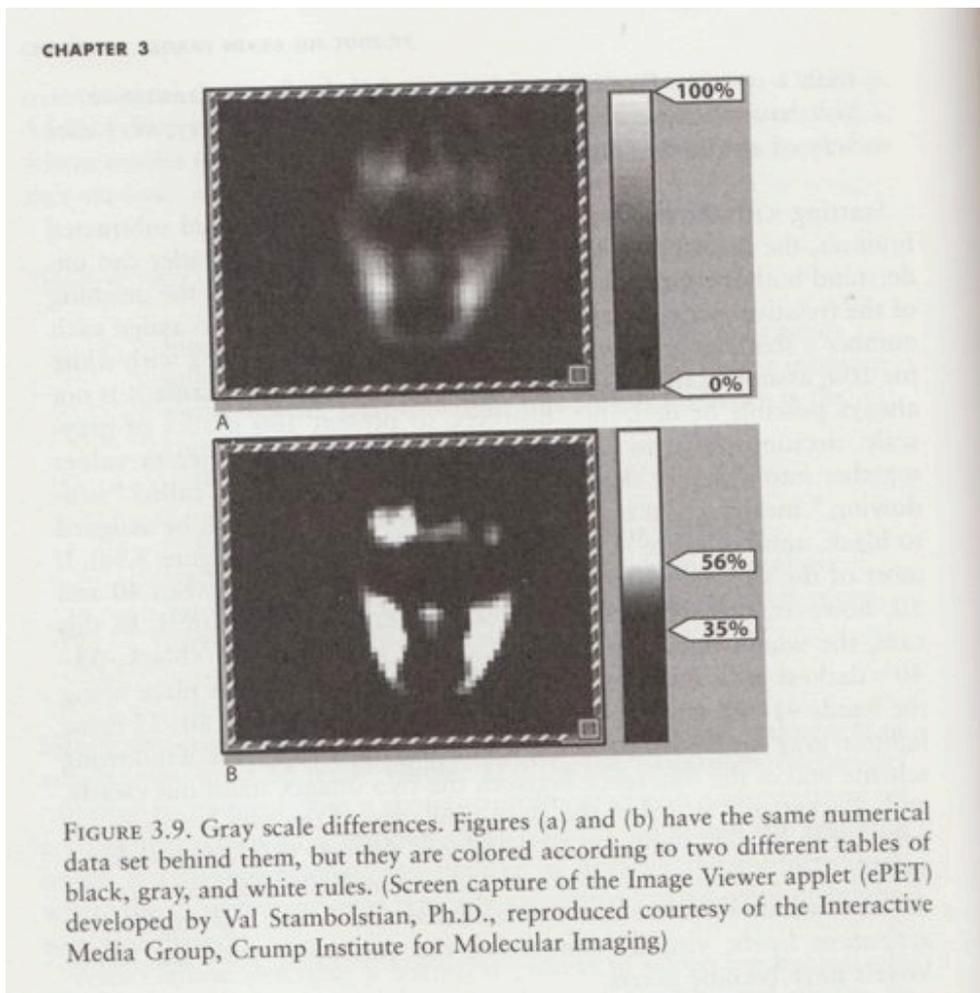
Second, let us have a look at brain imaging for an example of tight translation based on mechanical recording (Dumit 2004, column 2 of table 1). Both in the case of functional Magnetic Resonance Imaging (fMRI) and Positron Emission Tomographs (PET), brain imaging works by exposing patients, or healthy research subjects, into a visualization device and then giving them tasks to

complete, such as thinking about something or doing calculations, thus it is a matter of *manipulating the research subjects*. fMRI and PET then produce images of what is happening in the brain with fully automated tomographs which are *mechanical recording technologies*. These result in coloured or black and white representations of particular areas of the brain, which do not resemble anything that would be visible to the human eye. The *visualizations are heavily manipulated* to make brain processes visible. These are then interpreted as showing brain activity and thus demonstrating the brain processes at work for the particular task. Together, these many steps - and the many black boxed steps hidden within the technologies of the scanners - amount to rather *tight translations*.

[Insert Figure 2 about here]

Figure II: PET Scan, gray scale image.

Source: Dumit (2004), with permission from The Interactive Media Group at Crump Institute for Molecular Imaging, University of California at Los Angeles



If we look at the two examples together (columns 1 and 2 of table 1), we can see that the life sciences, as with most natural sciences, rely mostly on *tight translations*: researchers use innumerable steps to translate their research objects

into a cognisable result. These translations are based on a massive employment of all kinds of media, both mechanical and non-mechanical: from computer operated cameras to hand drawing to collecting and measuring soil or plants. Not only do biologists use all kinds of media, they also manipulate both their objects and their representations routinely and in various ways. The images they produce do not show a naturalistic image of the brain or the rain forest, but a translation of these objects that makes them amenable to research purposes.

In short, in the life sciences (and other natural sciences) there is a massive employment of diverse media, both mechanical and non-mechanical, combined with a manipulation of objects and images. We would not say that their research is thus compromised and subjective, rather, if at all, these research results are perceived as highly objective, *because* they employ images and manipulations. Imaging and manipulation are therefore a feature of, not the antithesis to, the supposed rigour of natural science. Or in the words of Bruno Latour: ‘the more manipulations the better’ (Latour 2013).

What unites the varying forms of representation in the natural sciences is a highly sophisticated use of various media, including manipulation of both the research object and its representation. Researchers employ these media because they attempt to make the invisible visible, rather than simply aiming at mimesis and transmitting what would be visible for everyone to a wider audience. The complex chains of steps in the deployment of moments of translations are necessary, because scientists can never be sure about the epistemic status of their research object.

Laurence Smith and his colleagues have shown that the amount of inscriptions, or translation steps, measured as the amount of diagrams and other visualizations in journal articles, correlates precisely to the everyday notion of the hardness of a science (Arsenault, Smith and Beauchamp 2006; Smith et al. 2000). The harder a science is usually assumed to be, the more visualizations the average article contains.

As Smith et al. show, the amount of visualizations decreases when moving from the natural sciences to the social sciences: physics, followed by the life sciences has the most visualizations, followed in turn by psychology, economics and, finally, sociology. Smith et. al. have thereby empirically confirmed the Latourian idea that the more manipulations the better. Empirically, tight translations go along with the extensive use of various media and manipulations of the object and the representation and not, as sociology normatively would like to have it, extolling the ‘scientific’ abstinence from imagery and manipulation.

Ironically, Latour himself (and Actor Network Theory more generally) does not follow his own insight. His own translations are loose, rarely use a variety of media other than textual translations, and do not rely on manipulating representations or the objects of research. As Mike Savage has noted,

‘there is a certain lack of reflexivity in Latour’s account here, which is that, while recognizing how inscription devices litter the social and natural worlds, he is not prepared to participate in this process’ (Savage 2009: 166).⁵

Latour, in line with much of qualitative social science, produces a particular kind of loose translations. Obviously, both this article as well as Savage's is themselves testament to this lack of reflexivity. The author of this article, though, has contributed in other texts to such a new visual sociology: The reason why this article does not rely on complex translations is because of the specific features of loose translations.

5 Tight translations within sociology: textual only

We can now ask whether sociology also produces tight translations. The brief answer is: yes, it does, but these are few, and they are primarily text-based (Column 3 in table 1). Notably in survey and questionnaire research, people are asked precise questions and their answers are recorded on paper, either by themselves or the researcher, and very often these answers are forced into pre-defined categories (for some sociological studies, see Maynard et al. 2002). A question may be: 'How many hours did you work last week?' with the answers then chosen from predefined ranges: '0–10', '11–20', 'don't know' etc. Thusly, such research depends on the *manipulation of the research object*. The respondents are asked questions that they would never pose to themselves, and they are not at liberty to answer in a self-determined fashion. The researcher is likewise manipulated, due to she not being allowed to react to the answers, as would occur in normal talk, and therefore also becoming an instrument of the questionnaire: 'I did not write the questions!', as the title of an article expresses this problem (May 2002). The *representations are manipulated* too, because the answers, if they are written down by the researchers are turned from their naturally occurring form into one fitting the questionnaire and then, the answers in the questionnaire are further translated into data by ordering them, classifying them and so on.

Further, quite often, such – originally textual data – are translated into visualizations, graphs, or more recently network analysis. Crucially, sociology does not conceive of these as 'visual sociology'. Moreover, these visualization practices are restricted to transformations of textual data into visualizations (but see Manovich 2011). In short, within sociology tight translations do exist, but these are restricted to textual transformations and to transformations of speech to text, and text to images. These tight translations, strangely, are seen as 'objective', although they do not adhere to the mistaken idea of objectivity within (visual) sociology that objectivity results from mechanical representation technologies and non-manipulation of data.

6 Visual 'Documentation' as mimesis: Mechanical recording without manipulation

But what about visual sociology? Does it not produce tight translations with its mechanical recording technologies, such as photography and the use of video cameras? Interestingly, in sociology, the more mechanical the recording technologies, the less translation steps and the less manipulations of either object or representation are involved.

Let us look at a typical example of visual sociology, Douglas Harper's "Changing works. Visions of a lost agriculture" (Harper 2001, column 4 of table 1). He observes and interviews farmers and takes precise photographs of their working practice, to document the disappearance of particular ways of

farming. The photographs are a *mechanical recording technology*. They are taken as part of an ethnography, that is, without telling the subjects to pose for his photographs or answer to tasks, in short, *without manipulation of the subjects*. The photographs are then developed and reproduced in the book. Apart from carefully developing the photographs, they are and should *not be manipulated*. They show what a skilled eye would see in the field too. The photographs are mimetic ‘documents’; they show an observable situation in the field and make it accessible for others who were not co-present. The camera is not used in an unusual way and the image is not post-processed in unusual, ‘unnatural’ or rather: ‘unsocial’ ways either (at least nothing that comes close to PET-scans). Because objectivity within visual sociology is associated with mimesis, the documentary and ‘adequate description’, much weight is given to mechanical recording technologies. Thus drawing is rarely used because it is believed to be incapable of ‘adequate description’, and so is any manipulation that would make a photograph ‘less realistic’ in a conventional sense. For visual sociologists, ‘interpretation’ is a separate step, which is not intrinsic to the translations of images and which would manipulate them, but is a difficult act by an unconstrained viewer, who, in principle, looks at an adequate representation of what happened and what she could have been seeing if she were present.

When we compare tight textual translations and the use of photography in sociology a curious pattern emerges: The more a translation moves away from textual media, the *less* manipulation of the subject is involved and the less translation into another medium occurs. In ‘structured’ interviews, the translation from spoken text to paper is controlled by controlling the interview subject and manipulating the medium. However, in the case of conversation analysis, to take another example where the subject is not manipulated, a highly complex transcription apparatus is involved (thus also involving a manipulation of representations) (Lynch and Bogen 1994). In the case of photography, controlling the subject and the representation is considered anathema.

The focus on mimesis and the documentary also shows how sociological photographs are usually understood and legitimated: The selling point of visual sociology has never been that it makes sociology more esoteric, rather the opposite: Photographs are supposed to enhance an argument and to make it more widely understandable than if it were merely text. But tight translations do not serve this purpose: biological scatterplots, PET scans and quantitative sociological diagrams are meaningless for lay people and only make sense within a technical scientific text.⁶ Thus in visual sociology the idea of the image follows the logic of mechanical recording, supposedly leading to tight translations, but in fact accomplishing something else entirely.

7 Science as loose translations: The exceptionality of writing

But looking at sociology as a discipline, not all its research is documentary or based on tight textual translations. What, then, about classical ethnography or social theory?

Let us look at an ethnography, Gary Allan Fine’s research on how cooks work in restaurants (Fine 1996, column 5 in table). Fine is interested in how cooks organise their work, so that they can serve food in time and according to their

standards. To find out about this, Fine spends a lot of time in restaurants, observes, listens, smells, eats, interviews staff and takes notes, such as for example this one:

‘The mushroom mousse is cooked halfway through. As Diane tells me: “It takes a long time to serve. So we do it this way to save time.” They also do not cook beef Wellington to order but reheated slices when needed.’ (Fine 1996: 28).

He finally writes a book out of these notes. Again, a number of translations take place: Observations with eyes and ears, and with nose and mouth are translated into field notes, which are compressed written observations of what was going on, and then these field notes are again translated into a text.

As in documentary sociology, the research subjects – the cooks and the mushroom mousse – are *not manipulated*. But here, the recording technologies used are primarily *non-mechanical*: Fine’s body registers what is going on and from there he translates this into written text. There are only two translation steps involved: from his body to the notebook and from the notebook to the text. These are *loose translations*, not only because there are few steps involved, but also because these steps cannot be accounted for. It is impossible to demonstrate how looking at (and maybe touching) a mushroom mousse translates into the words ‘cooked halfway through’.⁷ These loose translations also imply that the representations are very much manipulated, if we understand by this precisely the very creative process of (re-)writing ethnographic observations. It is exactly the strength of such ‘loose translations’ that they condense what did never exist and that they are able to catch what cannot be translated with tight translations. The huge translation jump becomes necessary, because the detailed aggregation of all these things together cannot reproduce the ethnographic essence of what is at stake. ‘Unlike the zoologist who describes the mollusc before him, the ethnographer must imagine the ‘whole’ that is society, and convey this imagination of wholeness to his reader along with the descriptions of places seen, speech heard, persons met’, is Robert Thornton’s summary of the need for what he terms ‘ethnographic holism’ (Thornton 1988: 285). Thus, within ethnography, there is an understanding of loose translations as a *positive feature*.⁸

In social science and the humanities such loose translations have largely become known under the label of ‘interpretation’. However, the term interpretation does not capture what I mean by loose translations, because even tight translation involves interpretation, except that the interpretive steps are very small, as has been argued since the beginning of STS (Knorr Cetina 1981 chapter 7). Conversely, interpretation within the humanities can be a process based on extremely small translation steps, as for example in the case of ‘close reading’. What distinguishes loose translations from tight translations is the combination of an ethos of non-manipulation of the object with a belief in larger, creative or poetic manipulation not of the object, but of the resulting translation.

Sociology as a ‘third culture’ between literature and science has always acknowledged that its own production of texts is not merely an instance of mechanical objectivity, but also a creative process (Lepenies 1988). Since the debates on reflexivity that emerged in anthropology and spread to sociology this view has become accentuated (Clifford and Marcus 1986; Woolgar 1988).

Apart from the case of ethnographic writing, there is a second version of loose translation, namely the overarching theoretical terms and theories such as evolution, structure, function, system, field or network. These are loose translations because they cannot be derived from an epistemic object; they require a creative effort whose very quality is that it looses its attachment to an object. The same qualities hold for whole theories or theoretical repertoires such as ‘critical theory’, ‘evolutionary theory’ or ‘complex systems theory’. However much these theories depend on empirical research, these are loose translations, because their internal cohesion always overrules empirical detail and also creates a linguistic unity and a language form independently of its link to the empirical world.⁹ What you learn from such theoretical texts is not a precise representation of some specific aspect of the world, but a way to think about and view the world.¹⁰

Jay Ruby (1996), when trying to explain why photographs are rarely used in ethnography, writes that photographs are seen as problematic, because they are *direct* translations and thus cannot ‘convey abstract ideas’, while in ethnography

‘the researcher must convert the complex experience of fieldwork to words in a notebook and then transform those words into other words shifted through analytic methods and theories’ (Ruby 1996: 1351).

However, Ruby believes this is a disadvantage of writing because it ‘denies much of the multisensory experience of trying to know another culture’ (Ruby 1996: 1351). But he conflates the use of different media with the problem of abstraction or loose translation. He again stumbles into the pitfalls of asymmetric media-determinism, by assuming that language can only convey abstract ideas, while images produce ‘multisensory experience’, presumably a less theoretically mediated form of scholarly communication. But PET scans are no less ‘abstract’ or ‘analytical’ than a theoretical text in sociology. The difference is that the former are tight translations that move slowly from one medium to another, while ethnographies do it in one big jump. As we will see in the next section, there are also images that can do quite complex *loose* translations. The problem is that *photographs as they are used today* in visual sociology and anthropology cannot.

8 What is missing: Visual loose translations and proper tight translations

After this overview of the forms of translations commonly used in sociology, we can ask what is missing, by looking at the pattern of combinations of fields in table 1. We can detect those combinations of fields that are possible, but underexplored in sociology. The argument I make here points to a curious explanation for why these forms are underexplored: Sociologists believe in an unequal media-determinism based on a particular notion of objectivity. They believe that images should be objective in the sense that they are mimetic or documentary. But by analysing natural science, we can learn that the more visualizations, the more manipulations, and the tighter the translations, the harder a science. Thus if sociologists wanted their discipline to become a harder science, they would attempt a visual sociology of tight translations. Yet sociologists, probably for good reason, believe that some aspects of the social world cannot be grasped with tight translations. To analyse society, sometimes loose translations make sense. At the same time, sociologists believe that such

loose translations are impossible in any other medium than text, lest they become art. Following my analysis, it would make sense either to believe in science as tight translations, thereby initiating a (visual) sociology of tight translation, or sociologists could maintain that society very often eludes tight translations, but then the discipline could profit from loose visual translations. As an eclectic scholar, I believe sociology would profit from both. To conclude, I would like to present three examples of such missing routes that could be explored.

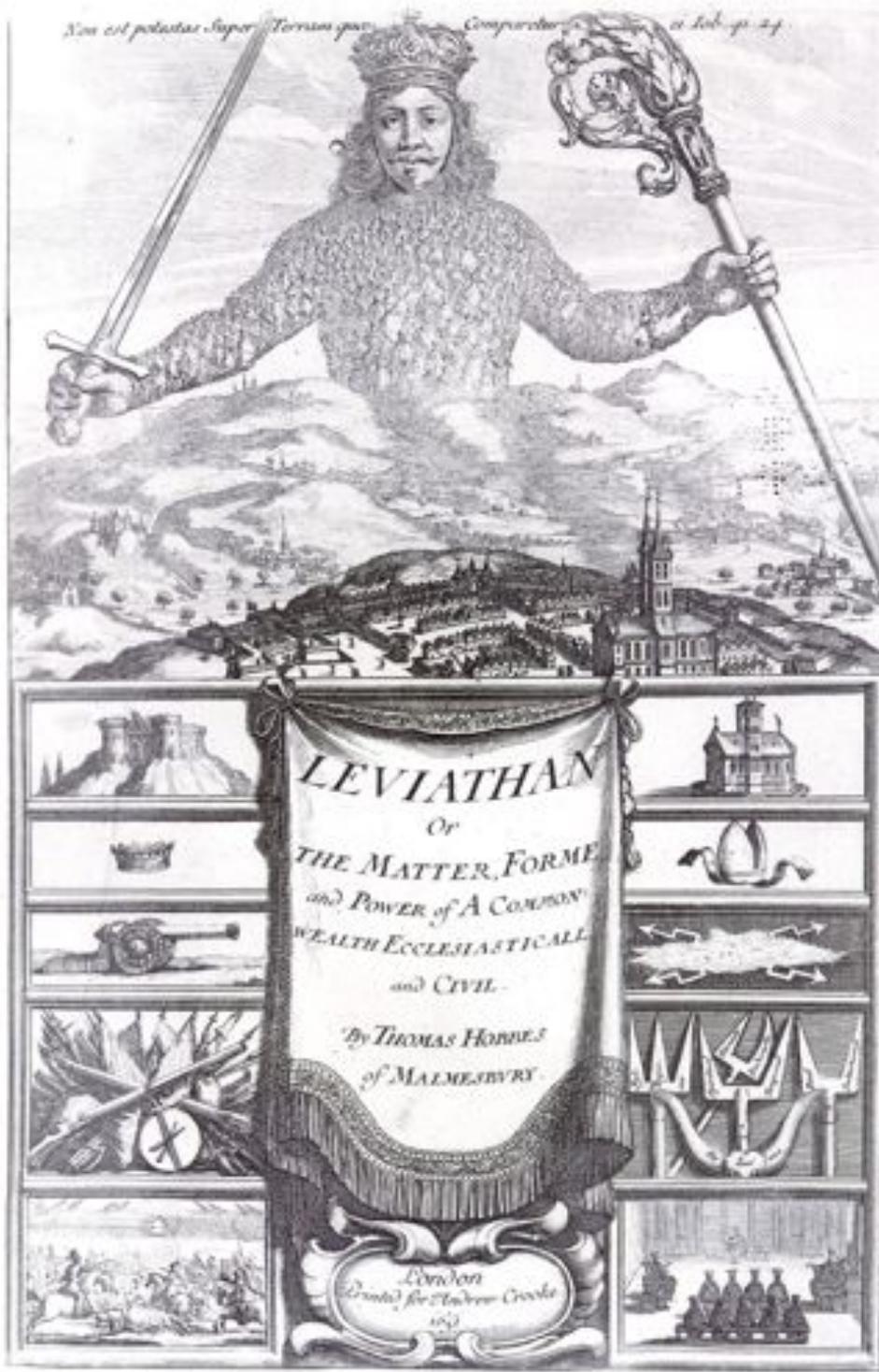
The first of the missing forms are those of visual loose translations (column 6 of table 1). Visual loose translations are in fact rather common, but in a visually poor form, namely as theoretical diagrams or ‘pictures of nothing’ as Michael Lynch calls them (Lynch 1991). Lynch discusses for example Ostrom’s diagram of ‘the internal world of individual choice’, a box filled with words linked by arrows (Lynch 1991: 3). Another example would be Pierre Bourdieu’s diagram of a Kabyle house (Bourdieu 1979). In both these cases, non-mechanical forms of representation are combined with loose translations. Unlike ‘visual sociology’ such diagrams do not depict what is visible, but what is invisible. Even in Bourdieu’s example, the diagram is not about a real house form, but about visualizing a cosmology that is inscribed into a house. The only example in contemporary social science of a more complex diagrammatic language is possibly the late Alfred Gell’s project of ‘Strathernograms’, an attempt to translate Marilyn Strathern’s complex ideas of Melanesian society into diagrammatic form (Gell 1999). But the interest within sociology to develop more refined and more complex versions of such diagrams is scarce (Grady 2006).¹¹

To understand what could be possible, compare the diagrams of Ostrom or Bourdieu with earlier examples from the history of the social sciences, such as the frontispiece to Hobbes’ *Leviathan* by Abraham Bosse. For Bosse, the question was: How to adequately depict the relationship between rulers and ruled and the role of the church and the state for this relationship? The visual imagery of this single image is so rich and has proven so influential, that a whole monograph can be written about it (Bredekamp 2003). It cannot be understood by terms ‘objective’ or ‘subjective’, science or art. It has to be seen as a specific form of translation of a complex *theory* into a pictorial world. But at the same time it adds to that theory and it becomes that theory, because it condenses the elements into of the theory into a visual narration of social ordering with complex and dense symbols for theoretical concepts. The depiction of the *Leviathan*, as composed of small homunculi has proven to be an extremely influential contribution to social theory, which still informs micro-macro debates to this day.

[Insert Figure 3 about here]

Figure III: *Frontispice of “Leviathan”*

Source: (Hobbes 1651), Public Domain.



The seeming naturalism of the visual language, derived from Arcimboldo and others, has nothing to do with depicting real humans, or any such documentary idea, but neither does it reduce a theoretical idea to a few arrows and circles, as it would be done today. There simply is no tradition of loose translations within current sociology, so Bosse's Leviathan is the closest existing thing to a guide for future works. If arrows and circles are legitimate translations of a social theory, wouldn't drawings like Bosse's be much better and richer

translations? Wouldn't a Bosse be a far better translation of Pierre Bourdieu's theory than his sketch of a house?

A second combination that we find is missing are the non-mechanical forms of representation in the context of tight translations (See table 1, column 7). A rare example for such non-mechanical forms of representation is David Efron's research on gestures of migrants (Efron 1941; also see McDermott and Raley 2011: 375–381). Efron took issue with the claim of German scholars that the wide-ranging gestures of Jews and southern Italians as a sign of a lack of intelligence. To refute this claim he researched the gestures of Jewish and Italian immigrants of different waves of immigration. He collaborated with Stuyvesant van Veen, who invented a complex graphical system to draw the movements of gestures.

[Figure IV about here]

Figure IV: *Gesture Drawing.*

Source: Efron (1941: 193), with permission from Walter de Gruyter GmbH.



With the help of these drawings Efron could show that the longer immigrants stayed in the US, the smaller the range of their gestures became. Gesture range, Efron concluded, was not a sign of lacking intelligence, but of assimilation. While Stuyvesant's drawings are not based on manipulating the object, they are clearly based on manipulating the representation. They do not depend on mechanical recording but on the unique possibility of drawings to turn movement into a flat and frozen representation by indicating the movements

with arrows but also overlaying several drawings of hands and arms within one drawing. Multiple arms and hands of a person do not exist for the eye, but only relying on these unrealistic drawings allows Efron to prove his point.¹²

The third missing example is mechanical representation combined with manipulation of both the object and the representation (column 8). While manipulation of research objects was quite usual in early experimental sociology, since the 1970s it has mostly been left to social psychology. Recently there is renewed interest in sociological experiments even in qualitative sociology (Webster and Sell 2007; Collins et al. 2006). While these experiments prove how sociologists dare again to manipulate research objects without believing this compromises objectivity, they usually do not employ complex forms of visualization and manipulation of representations. Bernd Kräftner, Judith Kröll et al. provide us with a rare example of such research with their project on vegetative state patients (Research Center for Shared Incompetence, Kraeftner and Kroell 2010). They are interested in the question of how care relates to the mental states of vegetative state patients. After having ethnographically analysed the medical forms of assessing mental states, they went on to develop their own assessment project. Ethnographic details, strongly based on drawings (Kräftner and Kröll 2009), showed that observing (comic) interactions with patients may provide better ways of assessing the states of these patients than medical imaging based on non-interference. The research team then built an apparatus that shows patients video feeds of humoristic videos while at the same time filming the patients facial reactions to these videos. They then create what the authors call ‘humour portraits’, large composite images of video-stills, placing the portraits of the patients next to the video still that they were shown at this point in time (Research Center for Shared Incompetence, Kraeftner and Kroell 2010: 184–191) (see Figure V).

[Figure V about here:]

Figure V: *Humour Portrait*

Source: Research Center for Shared Incompetence, (2010)



They then showed these ‘humour portraits’ to carers and family members to assess these double stills and earmark those where the assessors thought the patients were laughing. This put the judgment of what constitutes “laughing” –

as opposed to mere movement – into the hands of those close to the patients. While this method is similar to photo elicitation, it does not use the reactions of assessors to get at the ‘subjective’ views of the assessors, but to triangulate their judgments. These assessments were then coded onto the double images themselves by controlling the gray-value according to how many assessors identified laughing. If one looks at a fullscale print of these collective assessments, a viewer can then easily interpret both the overall amount of laughing (by assessing the overall darkness of the image) as well as on a qualitative level each instance of laughing, by getting closer to the image (see figure VI).

[Figure VI about here:]

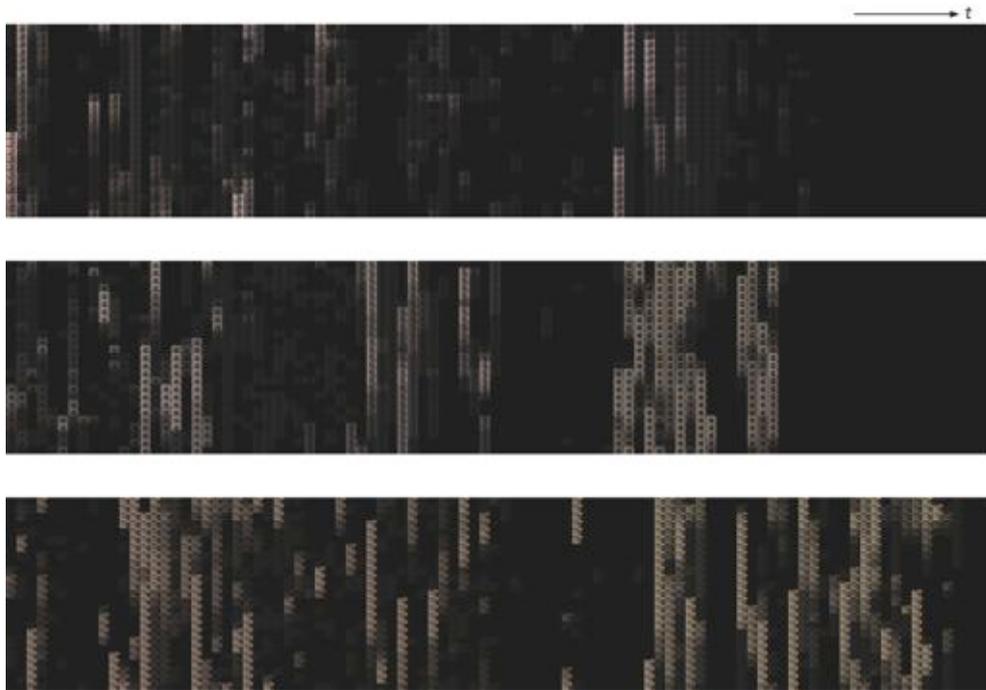


Figure VI: Laughing activity of patient G.M., *gray-scale manipulated collective assessment of humour portraits*

Source: Research Center for Shared Incompetence, (2010)

Kräftner et al. thus *manipulate the research subject* by showing them videos to make them laugh. They also employ *mechanical recording technologies*, namely computer operated video cameras, and they highly *manipulate the images* by reducing a video stream to a sequence of stills, pairing the stills of patients with those from the movies, and finally changing the grey values of the images. By doing so they do not leave the ethnographic sensibilities of medical sociology, but they update it with a visual practice that is not caught in a mimetic and documentary idea of visual sociology. Their project is precisely about what cannot be seen when looking at patients. Their setup produces visualizations of mental and bodily states as outcomes of long, complex and tight translations precisely because they are not visible.

These three examples show the rare possibilities of largely unexplored opportunities for the different use of various media within sociology. They

open up new avenues, which are certainly not less scientific, or less objective, ways of representing the social.

9 Conclusion

In this article I have tried to elucidate new ways to think about media in sociology. I started by analysing discourses within the field of visual sociology. I showed that these rely on two assumptions: First, they rely on an asymmetric media determinism that assumes that only photographs have inherent problematic properties, while texts do not; second they rely on the assumption that non-manipulation and the use of mechanical recording technologies guarantee objectivity. I then introduced the notion of translations to find a more symmetric way to talk about media. I introduced various distinctions between tight and loose translations and between manipulation and non-manipulation of both representations and objects of research. With the help of these distinctions I showed that the natural sciences rely heavily on tight translations based on the manipulation of both the objects of research and their representations. Sociologists, in contrast, only use tight translations for texts. They also use loose translations, but again for texts only. For other media, sociologists mostly rely on a mimetic idea of media or what I call 'the documentary', the use of mechanical representations without manipulation of representation and its objects. I finally discussed some examples of what is missing in sociology, namely loose translations within visual sociology (the drawings of Abraham Bosse), properly tight translations within visual sociology that include the manipulation of representations (the work of David Efron) and the manipulation of objects (the work of Bernd Kraeftner et al.). These few examples only hint at a multitude of unexplored possibilities that sociologists could use to analyze and represent the world. They also indicate a future for sociology, where the visual is not relegated to a subdiscipline that has to legitimate its use of imagery via recourse to some mistaken ideas of objectivity, but by placing it as part and parcel of a multitude of the available research strategies of sociology itself. Sociologists would decide based on their research questions which media to use for which kinds of translations.

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² None the less, a similar analysis could be made for the discourses on film and video and other media such as performance (for a similar analysis of film, see Suhr and Willerslev 2012). The same is true for visual anthropology, a (sub-)discipline with a longer and stronger history than visual sociology, but equally dominated by a media-specific determinism as analysed below.

³ For further interpretations of this state see Fyfe and Law (1988) and Keller (2006).

⁴ For an experiment, replace the words “film or video” in the sentence above with “text” and consider what sense it might make in a text on working with textual data and think why such a sentence would not occur.

⁵ Though, even if Latour did little to create tight translations, he is a pioneer of “loose” or in Michael Lynch’s phrase “deconstructive” diagrams (Lynch 1991: 16), as well as a prime instigator of novel translations as curator of the exhibitions Iconoclash and Making Things Public.

⁶ However, there are ways how these may be included in lay interpretations, such as used as “art” (Rickli 2011) or when used as part of popularization. However, scientific images as art exactly do not work in a documentary way, since what can actually be seen on them requires a lot of contextual information to even know what is visible. An interesting counterexample to my claim would be the images of unborn babies used by anti-abortion campaigners or the images of tarred lungs used by anti-smoking programmes.

⁷ Note that it would be possible to create much tighter translations to establish this fact, and this is what food scientists and cooks routinely do: they employ a

precise language, thermometers and test audiences to assess food qualities. This is not to imply that Fine should have followed this route, but to show that these are *choices* ethnographers make.

⁸ Thornton, among others, has critiqued ethnographic holism for turning cultures into uniform wholes. But this is not at stake here: The ethnographic method in itself, even if it does not turn cultures into wholes, depends on some moderate kind of holism to describe situations.

⁹ Note the similarity here to Daston and Galison's idea of "structural objectivity" (Daston and Galison 2007, chapter 5), Kuhn's notion of a paradigm or Fleck's notion of a thought style.

¹⁰ In the natural sciences there are loose translations too, but they are rarer and often disputed, and typically occur in a particular genre of semi-popular cosmological theories. Loose translations as texts in the natural sciences play a similar role to visual sociology to sociology: They are seen as less scientific forms. As an example, see E.O Wilson's *Consilience* (1998). For a case study of such controversial loose translations within the natural sciences, see Beller (1998).

¹¹ See also Grady on the non-reception of Edward Tufte in sociology (Grady 2006).

¹² For an even more elaborate system of notational drawing see how Brenda Farnell uses Labanotation to analyse moving bodies (Farnell 1994). Within Conversation Analysis Knoblauch and Tuma have turned video recordings of a movement of a laser pointer into drawings, see (Knoblauch and Tuma 2011).