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Visual rationalities: Towards a sociology of images

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Abstract
Images are ubiquitous in (post)modern societies. Nevertheless, there is a lack of conceptual frameworks which relate sociological theory to a thinking about 'the visual.' Sociological theory has widely neglected to reflect on images and 'the visual' and to explore the role of images in constituting and reproducing 'the social'. This article argues for a sociology of images. It aims to develop a conceptual tool to analyse images from a practice perspective. Following a theory of practice approach and referring to works in the sociology of science, it suggests the concept of 'visual logic' to analyse images sociologically. The article claims that social practice is intertwined with a visual logic. To investigate images from a sociological perspective, the article argues, implies to analyse the visual logic that shapes, and is constituted by, social practices. Taking medical images as an example and drawing on ethnographic fieldwork, the article shows how this concept serves as an analytical tool to explore the social role of images. Physicians and medical researchers use images both because of their visual and non-visual dimensions. The article thus concludes by pointing to a multitude of visual logics – or, in their empirical form, 'visual rationalities' – that become evident when observing image practices ethnographically.

Keywords
medical imaging, visual culture, visual sociology, visual studies

Images are ubiquitous in (post)modern societies – we live in what can be called a 'visual culture' (Jenks, 1995). Since the development of digital technologies, images have become easy to produce, reproduce and diffuse. Today, images are part of everyday practices. Sociological theory, surprisingly, has only rarely reflected on these developments, and visual sociologists have often been considered as marginal by sociologists studying

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society in general, who were not considering in their works the role of images and visual information in the (re-)production of society. In recent years, it became more evident to general sociology that images have to be seen as important forms of 'the social'. Images represent social realities and, at the same time, shape the ways people think and interact. By doing so, images accomplish more than just verbal communication. Nevertheless, there is a lack of conceptual frameworks which relate sociological theory to a thinking about the visual. By drawing on approaches in the social studies of science, this article aims at developing a conceptual tool to analyse images from a practice perspective. Taking medical images as an example, this article takes a closer look at the social role of images and its implications for sociological theory.

Images in this article are defined as artefacts. They are both visual and material objects; in other words, they are conceptualized as technical objects. This definition differs from three other understandings of images: 'inner images' or mental imaginations, physical expressions such as a bodily performance, or a view of the 'world as image' that differs from a perception of the 'world as text' by understanding the phenomenological appearance of any visual signs as an image. Sociological research on images has not been making such distinctions. The few classical sociologists working on images or the visual mostly dealt with the second understanding of the notion, that is, with bodily expressions. This is the case in the work of German sociologist Georg Simmel (1908) on early modern society. In his 'sociology of the senses', Simmel conceives the sense of seeing and the act of mutual gazing as important interrelations in modern urban life. In a broad understanding of the notion, the physical expressions of mutual gazing can be seen as visual representations. Similarly, Erving Goffman's (2005 [1967]) analysis of bodily performances in social interactions – the non-verbal 'presentation of self in everyday life' (Goffman, 1959) – can be viewed as a study of visual representations, which show how a presenter performs his or her role in an interactional situation.

Apart from these works, sociological work to date has only marginally reflected on the social implications of visual representations. Whereas most works in visual sociology have a primary interest in images as research tools, this article advocates the inclusion of images in any social reasoning. It suggests to reflect on the relations between images, social structures and cultural meanings in sociological theory by asking how social realities are shaped and transformed by images and, in a more general sense, how society is constituted, structured and reproduced by visual dimensions.

Building on this claim, this article develops a conceptual instrument to analyse visual representations from a sociological perspective.[1] The following section reviews how images were addressed in sociological literature in the past. In the next section, and building on an ethnographic study of medical images, the concept of 'visual logic' is defined to analyse images from a sociological perspective. Finally, the article concludes by pointing to the requirements of a sociology of images.

Images: The neglected artefacts in sociology

Following Max Weber (1988 [1922]), the aim of sociology is to understand the cultural conditions and meanings of society. However, classical sociologists mostly neglected the understanding that such an analysis must include 'the visual'. The Frankfurt School and

its representatives, Max Horkheimer and Theodor W. Adorno, as one prominent example, criticized 'culture industry' as being ideological and manipulative, without analysing the visual dimension of film and popular media. Walter Benjamin, who was in close contact with the Frankfurt School, was interested in ways of seeing when discussing his famous 'The work of art in the age of its technological reproducibility' (1936), but did not discuss the social meanings of visual representations from a broader perspective. Whereas classical sociologists, except Simmel, thus developed their analytical frameworks without thinking about the implications of the visual for the social order, Erving Goffman (1979) was one of the first renowned sociologists to study images in a more narrow sense. Goffman was a pioneer in discussing the relation between images and social structures. In his empirical study on gender advertisements, he examined how gender roles are visually represented and stereotyped in advertisement bills. French sociologist Pierre Bourdieu (1990 [1965]) and his colleagues focused on the social uses of photography and showed how the practice of photography in everyday life can be understood as expressions of and means for social integration. Bourdieu (1999 [1996]) also worked on the structure and effects of television. In a critical attitude, he pointed to the dangers television may imply for democracy. Television, in Bourdieu's view, provides an illusion of freedom, although broadcasted images in fact are expressions of the interests of specific social – especially corporate – groups.

In addition to these works of renowned sociologists, an increasing number of sociologists have explored visual issues since the 1980s. It is mostly researchers in the field of visual sociology who are dedicated to the study of images. Their interest is primarily a methodological one: visual media, such as photography, film and video, are not only examined as social objects but also deployed as tools in the research process (e.g. Becker, 1995; Chaplin, 1994; Hall et al., 2006; Harper, 1988; Knoblauch et al., 2006; Prosser and Schratz, 1998; Suchman and Trigg, 1991). Visual media are thus used not only as objects of study (when they are produced by social actors) but also as methodological instruments to achieve empirical data and produce new sociological knowledge (see also Pauwels, 2010).[2]

This methodological interest is shared by many cultural anthropologists who have been exploring the use of photo and film cameras in ethnographic fieldwork from the very beginnings of the development of these technical artefacts (Pink, 2006; Ruby, 2000). Whereas anthropologists used visual tools to represent 'the other', visual sociologists have shown a greater interest in using visual media to investigate social interactions in modern societies. Many visual sociologists have focused on the methodology of analysing visual data (e.g. Ball and Smith, 1992; Rose, 2007 [2001]) while often drawing on methodologies developed in the humanities such as Panofsky's (1962) studies in iconology. However, a sociology of images as advocated in this article has to look at the social implications and structures of the visual more broadly.

In contrast to mainstream sociology, social studies of science have been exploring the role of images for many years (for an overview, see Burri and Dumit, 2008). Several collections document the interest of an interdisciplinary approach to studying scientific images (Fyfe and Law, 1988; Nowotny and Weiss, 2000). Whereas historical studies of science have explored the role of images as instruments in experiments (De Chadarevian, 1993; Jones and Galison, 1998; Rheinberger, 1998; Schlich, 2000), and reflected about

the scopic past (Crary, 1990; Duden and Illich, 1995; Stafford, 1993), ethnographic *laboratory studies* prominently focused on the role of visual representations in the production and diffusion of scientific knowledge. Laboratory studies – an influential constructivist approach within social studies of science – were initiated by cultural anthropologists and sociologists who entered research institutions to observe the work of scientists 'in the making'. They showed how images contribute to constructing scientific facts by stabilizing and communicating a research finding (Amann and Knorr Cetina, 1990 [1988]; Beaulieu, 2001; Gilbert and Mulkay, 1984; Latour, 1986, 1987, 1990; Lynch, 1985a, 1985b, 1991, 1998; Lynch and Woolgar, 1990 [1988]). Latour and Woolgar's (1986 [1979]) notion of 'inscriptions' serves as a useful concept for studying images in the laboratory. Inscriptions, such as diagrams, tables and graphic illustrations, are defined as two-dimensional representations of an object. The characteristics of inscriptions provide them with specific advantages in 'rhetorical situations': inscriptions are easy to transport and remain immutable, they are flat and can be reproduced, and they can be altered in size (Latour, 1986, 1987, 1990). Laboratory studies also focused on the discursive and social contexts in which visual representations are used. Michael Lynch and Steve Woolgar's *Representation in Scientific Practice* (1990 [1988]) was the first collection to discuss the contexts of deployment of inscriptions. The editors underline that visual representations cannot be studied independently from the complex activities in which they are embedded: 'Scientists compose and place representations within texts, data sets, files, and conversations, they juxtapose different forms of representation, and they use them in the course of a myriad of activities' (Lynch and Woolgar, 1990 [1988]: viii). Lynch and Woolgar thus claim to investigate the textual arrangements and discursive practices related to visual representations. Other works put a stronger focus on the social forms of organization and work arrangements in which scientific images are used. In these works, the researchers are interested in how images are related to the social hierarchies and gender asymmetries of scientific communities (Galison, 1997; Henderson, 1999; Schaffer, 1998). The discursive and social contexts also play a crucial role in the production, interpretation and use of scientific images.

By drawing on these works and applying a practice perspective, the next section outlines an instrument to analyse visual representations sociologically. It presents an ethnographic case study on medical images and develops the concept 'visual logic'. It is the visual logic which should be examined by a sociological analysis of images.

Analysing the visual logic: Medical imaging in practice

Medical images have been explored in studies which showed an interest in their cultural intertwinedness (Beaulieu, 2001; Burri, 2008a; Cartwright, 1995; Casper, 1998; Duden, 1993, 1998; Dumit, 2004; Holtzmann Kevles, 1997; Joyce, 2008; Prasad, 2005b; Treichler et al., 1998; Van Dijk, 2005). In this article, an ethnographic study of medical images serves as one example to explore how imaging practices are shaped by a visual logic. What is called 'visual logic' here is a concept elaborated from ethnographic research. This fieldwork in medical imaging sites shows that there are three different visual dimensions of images that play a role in social practice.

The first dimension – the *visual value* – refers to the non-discursive characteristics of images. In social practice, it becomes important because it allows a simultaneous perception of visual information. The second dimension – the *visual performance* – points to the ways visual signs are composed in an image, in other words, to what is visually represented. The third dimension of an image's visuality – the *visual persuasiveness* – underlines both the importance of visual information in communication and the rhetorical power of images. These three visual dimensions of images constitute what is called a 'visual logic' in this article. By drawing on ethnographic fieldwork on medical images, the article explores how the visual logic shapes medical practices.

The ethnographic fieldwork was conducted in radiology departments and magnetic resonance imaging (MRI) units in the United States and in Europe.[3] It is not the aim of this article to provide a detailed account of imaging practices but to use medical imaging practices as one example to show how the visual logic can be analysed empirically.

Visual value

When observing physicians in radiology departments, one characteristic of images is crucial in their daily use: images allow social actors to perceive visual information simultaneously. Radiologist Bruno Aeschlimann explained,

> An image shows more than a thousand words. If I tell the surgeon what he is going to expect in the operating room, I need four pages. In the image, you see it at one glance.

In the daily hectic environment of the hospital or clinic, images simplify work processes because they allow one to grasp information in a very short time. Otherwise, physicians would be forced to write long reports and plan extended discussions to communicate a diagnosis to their colleagues. Instead of reading extended written explanations, physicians use images to grasp information quickly. This advantage of images is important in both diagnostic and operation practices. In the operating room, the simultaneity of the visual information is absolutely crucial. It enables the surgeons to observe their interventions on screen. This allows them to see small body regions and to adapt their actions when operating.

In research, the ability to grasp a situation at one glance is important when images are used for heuristic purposes. Images inspire physicians in the research process; they visualize the body, allow physicians to achieve a research finding and finally enable them to better comprehend it. These advantages of images are due to the possibility of seeing things at one glance. The simultaneity of the visual information is also of great importance when images are used to validate certain research findings. Medical researchers are able to compare diagnostic images. By looking back and forth between different images, researchers can validate a certain finding. This method also can be observed in daily radiological practice. Radiologist Bruno Aeschlimann uses a light box where he pins the X-rays and compares the left and right sides of a body organ. Because he looks at both images *simultaneously*, he is able to compare them and to find anomalies.

The characteristic of images to allow a simultaneous perception of visual information is due to their 'visual value'. *Visual value* refers to the non-discursive characteristics of

images as constituted through social practices. The visual value is the surplus value of images; it makes images different from auditory, olfactory, flavourful, or tactile signs. The visual value is constructed in social practice; it serves as a phenomenological criterion to distinguish images (as visual signs) from other signs, such as numerical or textual signs. It also underlines that images cannot entirely be transformed into textual or numerical signs without losing some of their advantages. Scientific images, for example, cannot be used in the same way when they are represented in digital numbers instead of showing a visual representation. Art historians have called the non-reducibility of images an 'iconic difference' (Boehm, 1994), by which they emphasize that images are more than texts. However, this notion serves to determine an ontological status of images. Such a definition is problematic because it defines the characteristics of images independently from social practice. The term 'visual value', in contrast, aims to emphasize that image characteristics are never independent from the epistemic practices and social contexts of actors.

In social practice, as described in the example of medical imaging, the visual value enables social actors to perceive visual information simultaneously. Whereas textual information is inherently sequential, the visual value of images allows actors to communicate and perceive a large amount of information at once. Art historian Max Imdahl denotes the simultaneity of visual information as 'concentration' and 'time compression', which allows an 'optical coincidence of still, not anymore, yet, and not yet' (Imdahl, 1988: 53–4; my translation).

Visual performance

In ethnographic fieldwork, it became evident that the aesthetic appeal of images is an important issue in medical practice.[4] Neuroradiologist Alfred Naumann, for example, often commented on the aesthetic quality of an image when glancing at the screen. Similarly, technologist Sandra Joss said, 'The images are beautiful', when she handed printed images over to the radiologist. Sandra Joss perceives an image as a beautiful picture if it is rich in contrast and detail.[5] During the production process, she applies aesthetic criteria to the images. She explained how she processed a digital body scan in postproduction:

> This knee here, I've smoothed it once. Why? So that it looks better. For family doctors the first impression of an image is important. For us too, of course. No one likes looking at a completely blurred image.

What can be seen in an image is thus the result of specific aesthetic decisions made during the production of the image. Such aesthetic criteria are incorporated and learned in social practice. In addition to aesthetic selections, the ways visual signs are organized in a scientific image follow specific professional and often local tacit rules. In his ethnomethodological study of a laboratory, sociologist Michael Lynch (1990) has examined how visual representations are fabricated through processes of mathematization and the selection of visual elements. He showed that both modifying interventions aim at making the object more useful for the researcher by transforming, neglecting, or boosting visual signs. The composition of the visual signs in such images is the effect of certain processes of formalization by which numbers are transformed into visual signs.

In medical practices, the ways the visual signs are composed in an image – what is called here the 'visual performance' – also are shaped by local sociotechnical arrangements and institutional contexts. Different imaging apparatuses, social norms and local routines to fabricate images are all inscribed into medical images (Burri, 2008a; Dumit, 2004).

What is seen in an image and recognized as the composition of its visual signs also depends on how the image is interpreted. Interpretive practices are shaped by cultural traditions of seeing and by professional skills of reading images (Joyce, 2008; Prasad, 2005a). Neuroradiologist Mario Mastroianis is convinced that visual traditions and cultural backgrounds shape image interpretation in medicine:

> The interpretation is very different depending on how you look at the image. It depends on your previous history, on the cultural background, and so on.

Visual skills to interpret a medical image are learned in medical school and habitualized in routine practice. As a consequence, differences can be observed between older and younger physicians. Older radiologists like to print out digital images on film to hold them in the hand when interpreting them. Younger physicians, in contrast, sometimes interpret the images on screen. Neuroradiologist Alfred Naumann claimed that such on-screen reading affects image interpretation:

> It is not possible to make a right interpretation on screen although many people claim you can do it. . . . If you make the diagnosis on screen . . . you no longer celebrate the intellectual, the precise viewing, but you adapt to the technology. . . . The interpretation becomes more superficial. . . . Many subtle things which you would have considered in earlier times get overlooked.

According to Naumann, the interpretation on screen neglects a 'precise viewing'. Instead, the interpretation is adapted to the existing technology; it becomes more superficial because details are ignored. In addition to generational preferences, there also are individually favoured ways of interpreting images. Some physicians prefer more analytical interpretation methods, whereas others rather rely on their intuition. Radiology professor Wolfgang Schmidt, for example, prefers an analytical procedure:

> Some people have a better visual sense. . . . I'm not one of them. I have to review and consider the images rationally, looking for symmetries and other such things.

Neurophysiologist Stefan G Meier, in contrast, follows visual impressions and only looks at measured values if necessary:

> First I take a good look at it. If I then want to know precisely what the activation is on that black spot there for example, I run the mouse across it and call up the value. But first of all. . . . It also really depends. I see it very visually.

Individual skills are deployed to deal with the problem of the interpretive openness of pictures, which is the biggest problem in using images in medical practice or in research.[6] Images are unclear and can be misunderstood; they leave space for heterogeneous interpretations. In the daily routine, this leads to many discussions about what images really

depict. In such interpretive disputes, claims to power are negotiated and enforced. Radiologist Gerhard Bauer suggests that 'Surgeons see what they want to in the images.' If surgeons wanted to do a certain operation, Bauer complains, they would find the necessary indication in the image. Ethnographic observation showed that differences in social status do indeed have an impact on image interpretation. A chief physician is more likely to be successful in convincing his colleagues of his interpretation than a young radiologist would be. Even gender may have a subtle effect on the ways images are interpreted, for example when male physicians are ascribed more authority in the social hierarchy or when women radiologists tend rather to consider a patient's account than to just rely on their own medical knowledge. The social order in which the actors are embedded is incorporated into their practical sense and shapes image interpretation. Such examples show that what is depicted in the image – the visual performance – is always a social and cultural achievement. The visual performance is not purely objective but contingent and situational, thus affecting medical practices in a contingent way.

Visual persuasiveness

In daily medical practice, images are used to communicate information and knowledge and to illustrate written reports. Even more importantly, images are used in talks with patients or colleagues to underline an argument and convince others of a diagnosis or research finding. When talking to patients, neuroradiologist Wolfgang Schmidt makes use of the persuasive power of images:

> In cases when a child has died, and you feel [it is] so impertinent to ask the parents if you may use the organs . . . we usually make an angiography. And [we say]: Look, we have tested it, there is no blood in the brain anymore. . . . And this is the advantage of the image: you can see it.

Seeing the images is a demonstration that the child has really died; the image works here as a rhetorical strategy. It is because of their authoritative power that images are deployed to convince patients of a certain therapy. Gynaecologist Bettina Matter explained how she tried to convince a patient to undergo a necessary surgery. The patient did first resist the operation but then agreed after having seen her body scans. In talks with patients, it is mostly the authoritative power of images that becomes relevant. Medical images are scientific images and thus viewed as 'objective facts' with authoritative power. In contrast, when using medical images in the scientific community, it is rather their aesthetic appeal and seductive power that is more effective. Urs Abegglen, a Philips company sales manager, often travels to medical congresses to present new imaging apparatuses. He described such conferences as follows:

> It is like a beauty contest. . . . You must see beautiful images that are high in resolution, that are luminous and perfect. A radiologist [with beautiful images] will sell himself better.

The visual persuasiveness in such professional contexts is quite dependent on the aesthetics of images – the more beautiful an image, the more attention it may get. Researchers use images in the scientific community to gain attention and to find support for their own

arguments (Latour, 1986, 1990). Scientists and physicians strategically deploy images in conference presentations and in publications. Because medical images are both authoritative and seductive, such images are very persuasive in social communication.

Visual logic

Based on the ethnographic fieldwork in medical imaging sites, three different visual dimensions of images could thus be reconstructed. They all are important in social practice and are crucial for a sociology of images.

The *visual value* becomes important in social practice because it allows a simultaneous perception of visual information. A sociology of images has to explore the role of the simultaneity of visual information in social practice and understand in what ways it shapes epistemic practices, social interactions and the use of images.

The notion of *visual performance* emphasizes that the composition of visual signs in an image is a result of social practices of image production and interpretation. The use of images – the performing images – *and* the ways realities are represented in an image are thus inherently social. In other words, the 'text' of an image is a performative achievement.

Analytically, the visual performance of an image allows one to reconstruct practices of image production and cultural structures of meanings. A sociology of images must investigate the processes by which image interpretations are interactively negotiated in social practice.

The third dimension of an image's visuality – the *visual persuasiveness* – is of crucial importance in social practice. Visual information is many times more effective than textual communication. From a sociology of images perspective, it is interesting to explore how social actors use the persuasive power of images and deploy them in communication.

The persuasiveness of images can be well studied by taking scientific images as an example. Scientific images are especially persuasive because they are both authoritative and seductive. On one hand, these images are perceived as objective and true depictions of reality and as able to prove something (Daston and Galison, 1992, 2007; Dumit, 1999; Golan, 1998; Jasanoff, 1998, 2004; Tufte, 1997). Because of this evidential power, scientific images unfold a rhetorical authority in social practice. On the other hand, the visual power of images is seductive. The aesthetics of images are very appealing. They evoke emotions and intuitively impact actors' perceptions. Both the authoritative and the seductive power of images appeal to the practical sense of actors (Bourdieu, 1977 [1972], 1990, 1998 [1994]) and shape their perceptions. The power of the visual persuasiveness depends on individual experiences, cultural meanings, social conventions, institutional contexts and local ways of thinking and perceiving. They all shape the ways images are seen and interpreted, and they are, at the same time, reconfigured by the production and use of new (e.g. digital) images. A sociology of images has to investigate the effects of the visual persuasiveness on social practices and contexts and ask in what ways the authoritative and seductive power is relevant.

These three visual dimensions of images – the visual logic – emerge from and shape social practice just like any other epistemic category. Nevertheless, it is due to the visual dimensions of images that they are assigned a specific epistemic status and differentiated from other objects in social practice. The specificity of 'the visual' shapes the entire

process from the production to the interpretation and the use of images. A sociological analysis of images has to theoretically reflect and empirically examine these issues.

Visual rationalities: Towards a sociology of images

In the past, sociological studies of images were mostly concerned with methodological questions, thus taking an image and its content as the relevant object of study. Such an approach has to be extended in three aspects.

First, an adequate sociology of images should not exclusively focus on how best to interpret and use an image in social sciences – thus revealing its meanings – but as well examine *how images themselves shape cultural meanings*. Sociology may profit here from earlier works in cultural and historical studies – from both the 'classical' works of Walter Benjamin, Roland Barthes and Susan Sontag to more recent ones (e.g. Crary, 1990; Daston and Galison, 2007; Mitchell, 1994; Stafford, 1996) – and from visual studies by cultural anthropologists. Such a perspective aims at understanding how visual representations form cultural perceptions and change regimes of seeing. The persuasive dimension of visuality is crucial in this regard.

Second, a sociology of images should not just reveal structures of meanings but also look at *practices*. It must include the social practices of constructing and using images in its analysis. By doing so, it may draw on works in the social studies of science (for an overview, see Burri and Dumit, 2008).

Finally, an analysis of the cultural conditions and meanings of images must reflect their *materiality*. As social studies of science have shown, materiality is important for scientific or social practices (Knorr Cetina, 1981; Latour, 1987; Latour and Woolgar, 1986 [1979]; Pickering, 1984, 1995). Scientific and other images thus have to be analysed in their material, visual and social dimensions.

Thus, a sociology of images should not focus on images alone but take the *social practices and contexts of image production, interpretation and use* into account. Visual representations have, as Michael Lynch and Steve Woolgar state, 'little determinate meaning or logical force aside from the complex activities in which they are situated' (1990 [1988]: viii). Such activities and contexts thus have to be included in the analysis. Images are not simply there; they are made through social practices. It is through the social practices of image construction, reading and deployment that images become a social reality. To study images from a sociological perspective, it is thus indispensable to look at the practices and contexts of image production, interpretation and use. In the case of medical imaging, such a perspective can reveal the social role of images in medicine. The example showed how the visual logic shapes medical practices. The visual logic constitutes a driving force of social practice. Because it generates specific forms of social reality, it can be understood as a generating principle of social practice. It became evident, for example, that the visual value is of great importance for surgical practices when images are deployed to navigate in the human body. Such practices are dependent on the visual value of images and could not be performed without the quality of images to show things simultaneously. At the same time, the visual logic is (re-)produced by social practices. This article thus suggests that social practice is intertwined with a visual logic. Investigating images from a sociological perspective implies analysing the visual logic that shapes, and is constituted by, social practices.

However, there are situations in which the visual dimensions of images are less relevant for social practice. In such situations, it is the status of images as material artefacts and social resources (not as visual objects) that shapes social practice. This is the case, for example, when images are used as strategic power tools. In daily work in hospitals or clinics, images are sometimes retained by radiologists instead of handed out to clinicians immediately. According to the statements of several radiologists, such action is the answer to clinicians' refusal to provide radiologists with all the necessary information required to interpret an image. In such situations, images are used as symbolic capital (Bourdieu, 1984 [1979]) that could be replaced by other epistemic objects such as written reports or medical test results (Burri, 2008a; Mol, 2002). In such cases, the visual logic is less important or not relevant at all for the shaping of social practices. In its empirical performance, the visual logic is thus contingent. Although in many situations, the visual dimensions of images are shaping social practices, in others, they are not relevant for actors' actions; it is then rather the material and social dimensions of images that are relevant. When observing social practices ethnographically, a multitude of visual logics – or, in their empirical form, visual rationalities – can thus be observed. In an empirical situation, different social interactions are shaped by different visual rationalities. It is the task of a sociology of images to reconstruct and analyse these visual rationalities by investigating how they work in practice.

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Notes

1. This article builds on earlier work published in German (Burri, 2008b, 2008c).
2. This focus is also expressed in the mission statement of the International Visual Sociology Association (IVSA): 'The purpose of the IVSA is to promote the study, production, and use of visual images, data, and materials in teaching, research, and applied activities, and to foster the development and use of still photographs, film, video, and electronically transmitted images in sociology and other social sciences and related disciplines and applications.' (International Visual Sociology Association, at: www.visualsociology.org). The Visual Sociology Thematic Group of the International Sociological Association (ISA), which was established in 2009, claims a broader perspective on 'the visual' but has not elaborated a broader conceptual framework yet (www.isa-sociology.org/tg05.htm).
3. Fieldwork included observations mostly in university hospitals in the United States, Germany and Switzerland. Thirty-five semi-standardized interviews and 15 ethnographic interviews with physicians, technologists and scientists were conducted between 2000 and 2004. Names of interviewees have been changed.
4. The role of visual aesthetic criteria in scientific practice has been studied for a long time (e.g. Lynch and Edgerton, 1988). The attractiveness of body images is underlined by Dumit (2004) and Joyce (2005, 2008).

5. According to well-known colour theories, contrast is an important element in images to make them appear three-dimensional (Itten, 1997 [1961]).
6. Klaus Amann and Karin Knorr Cetina (1990 [1988]: 87) underline that one of the most prominent difficulties for scientists is to translate what they see into language.

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Résumé

Les images sont partout dans les sociétés (post)modernes. Néanmoins on manque de cadres conceptuels qui feraient un lien entre la théorie sociologique et la réflexion sur 'le visuel'. La théorie sociologique a largement négligé de réfléchir aux images et au 'visuel' et d'analyser le rôle des images dans la constitution et la reproduction du 'social'. Cet article recommande de faire une sociologie des images. Il vise à développer un outil conceptuel pour analyser les images dans une perspective pratique. En adoptant une théorie de l'approche pratique et en se référant à des travaux en

sociologie des sciences, il suggère le concept de 'logique visuelle' pour analyser des images sociologiquement. Cet article soutient que les pratiques sociales sont liées à des logiques visuelles. Pour enquêter sur des images dans une perspective sociologique, il faut analyser la logique visuelle qui donne forme, et est constituée par, les pratiques sociales. En prenant l'exemple des images médicales et en s'appuyant sur un travail de terrain ethnographique, l'article montre comment ce concept sert d'outil analytique pour explorer le rôle social des images. Les médecins et les chercheurs cliniques utilisent des images à la fois pour leurs dimensions visuelles et non visuelles. En conclusion, cet article pointe une multitude de logiques visuelles (ou, sous leur forme empirique, de 'rationalités visuelles') qui deviennent évidentes quand on observe les pratiques autour des images ethnographiquement.

Mots-clés
culture visuelle, études visuelles, imagerie médicale, sociologie visuelle

Resumen
Las imágenes son ubicuas en sociedades (pos)modernas. Aún así, existe una falta de marcos conceptuales, que relacionen la teoría sociológica con un pensar sobre 'lo visual'. La teoría sociológica ha comúnmente olvidado reflexionar sobre imágenes y 'lo visual', y explorar el rol de las imágenes en la constitución y reproducción de 'lo social'. Este artículo aboga por una sociología de las imágenes. Busca desarrollar una herramienta conceptual para analizar imágenes desde una perspectiva de la práctica. Siguiendo un abordaje de teoría de la práctica y remitiéndose a trabajos en la sociología de la ciencia, sugiere el concepto de 'lógica visual' para analizar las imágenes sociológicamente. El artículo afirma que la práctica social está entrelazada con una lógica visual. Investigar imágenes desde una perspectiva sociológica, argumenta el artículo, implica analizar la lógica visual que da forma a, y que es constituida por, las prácticas sociales. Tomando como un ejemplo imágenes médicas y basándose en trabajo de campo etnográfico, el artículo muestra cómo este concepto sirve como una herramienta analítica para explorar el rol social de las imágenes. Médicos e investigadores médicos usan imágenes por ambas sus dimensiones visuales y no visuales. Así el artículo concluye apuntando a una multitud de lógicas visuales – o, en su forma empírica, 'racionalidades visuales' – que se vuelven evidentes cuando observamos etnográficamente prácticas de imagen.

Palabras clave
cultura visual, estudios visuales, imagen médica, sociología visual