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Mediated ethnography and the study of networked images -- or how to study 'networked realism' as visual knowing¹

The work we are presenting today is part of an ongoing interest in visual knowing. Both of us have done research on the way images are used to constitute the brain, as a way of knowing it. We have looked at a diversity of kinds of images, and analysed them in terms of their historical context, taking into account the technologies needed, the practices around the images, the institutions in which they are put to work, and how these images circulated. This work was pursued in the tradition of history of science and of science and technology studies, and this field continues to shape this new work.

With our current project, we are taking some of those questions about visual knowing to other settings and other objects. Furthermore, while our earlier work took 'the visual' as an *object of study*, we seek to incorporate the visual more explicitly and more extensively as part of our *research methods*.

The project is entitled *Network Realism. Making knowledge from images in digital infrastructure* and is pursued at the [Virtual Knowledge Studio](#) in Amsterdam. The Virtual Knowledge Studio (VKS) is an institute of the Royal Netherlands [Academy of Arts and Sciences](#). The VKS pursues research on the interaction between knowledge and technology, and supports various activities and projects on the topic of visualisation and

¹ This paper was presented in a session organized by Adolfo Estalella and Elisenda Ardévol on Internet Research and Visual Methods. The authors are grateful to the organizers and participants of the session for their comments and questions. We are also grateful to the many informants at our fieldsites who generously helped us in this work.

visual culture ([Cyswik, workshop](#) about visualisation in Fall 2009). We detail the progress of our research on our blog: <http://networkrealism.wordpress.com>.

In this project, researchers investigate ethnographically an aspect of visual culture called 'network realism', in order to understand how mediation and knowledge production are entwined in the use of databases of images. Four case studies form the empirical component of this project, and are all sites where digital images on the web are used. At each of these sites, we are focusing on the production and use of databases of images on the web. The four sites are constituted around practices at an art institute (the Rijksakademie), an ethnographic museum (Tropenmuseum), a real estate database (Funda), and Flickr (street art). In each of these fieldsites, images in databases are playing an important role for the constitution of knowledge and for engagement with knowledge.

One of our research questions concerns the role of networked aspects of images in visual knowing. In the rest of this presentation, we zoom in on one issue, at the interface between internet studies and visual anthropology: the 'networked image'. We reflect on what it means to study the uses and meanings of images in our sites, and illustrate on a practical level what it means to consider ethnographically practices around networked images. We are still in the middle of our first phase of fieldwork, and at a point where it is hard to see the forest for the trees. But we have identified three aspects of our fieldwork that seem fruitful in developing an approach to what we consider are important new practices of visual digital culture.

Our take on visual methods is that you have to include many aspects of images, besides the pictorial. We seek not only understand what is depicted², but also the conditions that make certain images possible, and how those images are understood, looked at and used in a networked setting. Therefore, in order to understand a networked image, like the ones in our databases, we feel we want to take into account: the database, the network and the interface. In other words, we want to stress that the meaning of these images is the outcome of distributed actions-- not only between the viewer and the image, but also in the database and networks—both social and technological. In our fieldwork, this translates into doing observations of the interface, infrastructure, and interaction.

² Following further exchanges on this with Edgar Cruz Gómez, it is clear that there is a danger in taking this aspect of images as read. The 'content' of an image is of course a crucial part of how it is seen/used/circulated, and we do not want to appear to be dismissive of this aspect, since it can play an important role in assigning expertise to a participant, or be the source of attachment, etc. We stress other ways besides depiction in which images are meaningful here because these tend to be underexamined.

Interface



One of the elements in our fieldwork is to study the interface between users and images. We define this broadly (not in the way a strict Human-Computer Interaction approach might) as the intersection of technological, material and social factors where users try to 'get a job done'.³ We analyse interfaces by trying to be co-present with users (Beaulieu, under review), to find out how they are viewing images and using these databases. So far, we have found that being behind a computer is not an easy place to be physically co-present, however, and that following all that is going on is challenging.

Establishing physical co-presence

In our experience of doing interviews and participant observation up to now, people have had a tendency to talk with us, at a table, and not really invite us to join them behind the computer. We think that this is in large part related to the material aspects of what it means to work at a pc in the settings we are studying. This tends to be solitary work, done by an individual sitting behind their computer. There just isn't really room for two people to sit together (in the photos included here, you see how we tend to be sitting quite far away from the screen, so that it is very difficult to follow what is going on). Because of this lack of space, this means that respondents tend to take us to other spaces in their offices or places of work where the space is physically configured for conversation. This makes us feel like we are missing out on stories that might be told or elements that might be shown if the screen were closer at hand. This issue also stresses the fact that pcs tend to be the tools of choice in these settings, since we expect that in an environment where laptops are more

³ We speak of 'getting the job done' the sense that it is a site of action, but we do not mean that it is strictly a place of instrumental behaviour.

widely used, it might be easier to configure a space where both conversation and screen might be included. But we also suspect that there is something particular about the junction of body, computer, and networked image, and the performative dynamics this brings about, that makes it harder to rely solely on physical co-presence. This is another side of visual knowing in and through networked databases we would like to pursue in this project.

'Capturing' interface practices

A second issue we have noted is our feeling of missing out on some of the practices that are going on. When we have been successful in engaging people as they sit behind their screen, we have at times felt incapable of taking down in our notes the richness and complexity of practices. We have also tried to do these interviews together, and also to take photos, but we came away from these experiences feeling like we had actually missed a lot.

Thinking back on these sessions, we have tried to identify what leads us to see them as partial failures. We seem to have a desire to *capture* the many things that are going on--a common but false hope of any ethnography, but one that is especially common when doing fieldwork in settings where digital media is prevalent. We too have been configured to think about these technologies in terms of their totalizing potentiality, and have been thoroughly exposed to the promise that the web can constitute a totally traceable setting (Beaulieu, 2004). It remains difficult to note not only the narratives of our participants but also the many activities and choices involved when using networked services. But rather than mainly invest in capture as a strategy to study these, we want to also orient our fieldwork to longer engagement, as way of noticing and learning about meaningful patterns in such practices. This pleads for fieldwork that involves a long engagement, rather than solely concentrated observations.

In contrast to the kinds of concentrated moments of observation, developing an ongoing relationship with participants enables us to trace complex practices at the interface. As part of our fieldwork at the Tropenmuseum in Amsterdam, for instance, we have been spending time with a small group of registrars and documentalists. Their job is to gather, register, classify and document information to be put in the museum's collection database, to accompany the images. The images and written information is also available - or partly available - via the museum's collection website. One of our informants has helped us a lot by being explicit about what she is doing while interacting with the database and the images. Recently, she was putting the information on a set of index cards of photographs taken during an expedition to Algeria in the database. A small subset of index cards on Nigeria were accidentally placed in the Algeria set. She looked at them, and suddenly remembered having seen a related picture as part of a set of not-yet-registered color negatives the museum had put online as an experiment. She keeps a printout of that set on her desk, in color. She started flipping through the pages of the printout, and subsequently queried the database, using keywords related to the people and objects identified on the index cards. This search was fruitful, in that it led to a record of an object owned by the museum, an object that the people on the photographs were carving out in wood. Our informant said she

remembered that the object was part of the museum collection, but needed to find it in the database in order to create links between the various records. In addition, she found pictures of the missionary who took the Nigeria photographs in a book in the museum library. She decided to scan the book pages, so that they could also be put in the database. The information, thus far spread out in different locations and media (index cards, database, printout, books, her memory), could now be related, and appear as part of the digital record. While she talked and worked, we were busy trying to follow her steps, looking at the screen, observing how she clicked, zoomed, looked up information in Google, scanned the book pages, etc., simultaneously putting what she said she was doing and what we were observing her doing into fieldnotes. Arguing for deep fieldwork won't be a hard point to sell with this audience... This said, we also feel there must be other or better ways of recording or noting what is going on on a desktop, without going too far in the direction of the 'total recall fallacy'. How to engage with this networked interface as analysts? We would very much like to hear about your experiences on this front.

Infrastructure

A second element we have been investigating is infrastructure. Studying this is actually the aspect that feels least new to us, because it is close to the kind of work we have done earlier in our STS work. Studying knowledge structures feels familiar—the mediation is different, but many of the principles are familiar to us because of the prominence of other documentation systems in science (archives, libraries, journals, lab notebooks, etc).

To investigate the databases and infrastructures at our fieldsites, we have been approaching them with an ethnographic sensibility. This means trying to understand the sociality that is built into the database. Each database is designed with an implicit or explicit model of the users: What they want to do or should do with the infrastructure, what they know, etc. Recognizing the built-in sociality of databases resonated nicely with this conference's first keynote by Professor Claudia Mitchell ("Visual methodologies in social action: From practice to policy"), in which she shared her goals to develop participatory curating⁴ for some of the material she has gathered in her work—thereby embedding a particular model of sociality in the database.

In our fieldwork, we investigate this sociality by becoming users, querying the databases, triangulating our uses with those of others in the field, and reflecting on our successes and failures in these interactions. We set ourselves the task to systematically think about this while using these infrastructures, and to take fieldnotes of our interactions. We therefore work hard at maintaining the ethnographic stance in our encounters with databases, and fight the tendency to encounter these sites as 'tools' that have to 'function'.

⁴ This is a mode of organization of curation work in which delegation to participants or lay-experts is encouraged, enabled and supported, in contrast to the usual restriction of curation activities to accredited experts within institutions of knowledge production.

One of our sites is the use by scholars of street art of the photo-sharing platform Flickr. Flickr structures interaction in a number of ways that shape social relations. The formation of groups (to which one may claim or earn membership, depending on its set up), and assigning the status of 'contacts' to other users are obviously social formations.⁵ But these social elements are not external to the meaning of images. The groups to which one belongs, or the contacts one has, or the frequency of one's uploads all shape the appearance of photostreams, or the degree of interestingness (and therefore of prominence) of some images. In some uses of Flickr, this can have a big influence on the understanding of visual material and how it is valued. Another element we examine is the importance of connections with other platforms, whether blogging or wikipedia, which further shape how these images circulate.

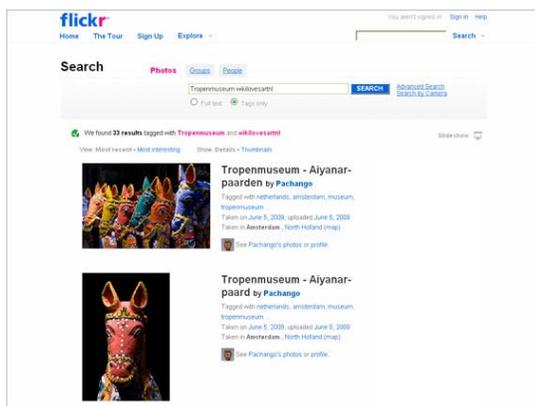
In this way, we learn a lot about the way infrastructures shape the use of images in which we are interested. To clarify: this is not a technologically deterministic approach, based only on our analysis of the design. We connect this part of our fieldwork to the ways users deal with the possibilities that are built into the infrastructures, which ones they value, and how they adapt them to their own needs and interests.

This closest to work in STS, and especially, the study of technologies, in terms of questions, but not in terms of the particular sites and kinds of material, namely visual images in a new context of web-based networks. While the questions in this part of our fieldwork are quite close to our earlier work in STS (and that of others in this field), the study of visual material in web-based networks is quite novel to STS.

Interaction

Finally, a third way we are looking at these practices is to consider how they are embedded in people's daily lives and in institutions, by understanding how the uses of images relate to existing contexts. We feel this is especially important because many studies tend to take certain platforms (whether Flickr or Wikipedia or...) as providing the limits of a field. We feel it is crucial to understand how knowledge practices have been shaped by the particular traditions or institutions in which users have been or are currently operating. Furthermore, in our case studies, the websites and databases have rather different relations to existing institutions, so that interesting differences become visible in our comparative work.

⁵ There are others, which are less obviously social, but that still mark identities of users (kind of account, level of documentation of photos, etc).



Sources: [http://upload.wikimedia.org/wikipedia/commons/0/03/WLANL - Laurine - DSC037421.jpg](http://upload.wikimedia.org/wikipedia/commons/0/03/WLANL_-_Laurine_-_DSC037421.jpg);
<http://irenesfotoblog.blogspot.com/2009/09/kunst-en-vliegwerk.html>

As an example of the ways in which images can play a role in a tension between different roles within the institution, here is another recent experience we had in our fieldwork at the ethnographic museum in Amsterdam. The Tropenmuseum has three photographers on staff, whose job is to photograph the ethnographic objects for the collection database; to digitize the many photo albums and negatives the museum possesses, also for the database; and to make photographs on demand, for instance for PR purposes (to accompany books written by curators, to be put on exhibition posters, or on the website, etc.). Around the time we started our fieldwork, a project called Wikilovesart/NL (WLANL) was launched in the Netherlands, following a similar initiative in the U.S. WLANL was a cooperation between a number of Dutch museums, Wikipedia, several internet providers, and creative commons NL. In June, this group of museums opened their doors to the public for special sessions, and allowed participants to make photographs of designated objects from their collection, with the goal of making the best photos available on Wiki platforms. Participants uploaded their images on Flickr, which thus served as a conduit for the

photographic material. The Tropenmuseum also participated, and some of the results can be seen on the previous page. Some of the photographs taken in the museum were considered as particularly beautiful by the museum's Public Relations department. The Tropenmuseum's Multi-media Developer told us that they were probably going to use some of the photographs on Flickr for PR purposes, and were also thinking of using them for display on the museum's multi-media screens. This made one of the in-house photographers very nervous, as she considered this fusion of her own photos with that of visitors to be a threat to her photographic expertise and professional identity.

By paying attention to the intersection of existing routines with web-based resources, we are able to see how certain boundaries and identities, linked to image production, are being contested, adjusted or reaffirmed. This part of our work enables us, on the one hand, to avoid painting an overly celebratory account of the use of databases of images. On the other hand, it also makes visible how certain practices are changing, even gaining institutional anchoring, thereby embedding the use of networked images in our social and cultural fabric. By focusing on particular events that throw these interactions into relief (such as the initiative Wikilovesart/NL), we are able to embrace some of the organizational and institutional dynamics, while keeping the fieldwork doable.

Concluding remarks

Ultimately, we want to relate our fieldwork to questions about knowledge production, and show that the manipulation of digital images in networks brings about other kinds of knowledge than, for example, those possible by physical co-presence with the objects represented, or the use of printed catalogues. Our ethnographic study of interactions with databases of images provides insight into the specific ways in which users and producers come to know through networked images, in contrast to other forms of visual knowing.

While not detailed in this text, our approach was developed drawing on three bodies of work. With regards to visual knowledge, on science and technology studies (Beaulieu, van Dijck, de Rijcke, Daston & Galison, Hine); with regards to the study of visual material, on visual anthropology (Pink, Banks, Edwards & Hart); and on the cultural particularity of digital forms and of the internet as media form (Elkins; Thurtle & Mitchell; Ardevol & Roig).

In our project, we are therefore studying interactions with digital images in and around databases, the visual as part of the social world we study, and the place of images at these sites of knowledge production. Because of the networked context, this adds a layer of interactions with images that is challenging to observe or to get people to talk about. The three aspects we have discussed here are interrelated and keep evolving. At this point in our research, we feel our fieldwork could most benefit from improving our 'interface' observations. Suggestions on how to integrate visual methods on this point are most welcome!

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