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Forum

Studying visual practices in construction

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The significance of the Building Research & Information special issue on ‘Visual Practices: Images of Knowledge Work’ (2007) is that it provides a window on a different and, in some ways, alternative mode of describing and theorizing the work of design professionals through the visual dimension of construction work, and it offers a more realistic view of visual practices. It shows that design activity is not a linear process composed of steps or phases; instead, design practice can be better understood as a social and material choreography. Three important themes emerge. First, visual artefacts have an active role in making things happen in the construction process. An enhanced understanding can prevent the blunders deriving from using inappropriate tools. Second, visual artefacts only become meaningful when applied within the context of a complex and ‘messy’ practice through understanding the interconnections of people, things, and discourses. The capacity of visual materials to contribute actively to the design process strongly depends on when different artefacts are introduced, their relation to specific activities, and how they are used in conjunction with other tools. Third, visual practices have an important capacity to support or prevent collaboration of different and, at times, distant parties and interests. Visual artefacts can operate as ‘boundary objects’, thereby creating a simultaneous response to different concerns and serving as common points of reference.

Keywords: collaboration, communication, design process, knowledge exchange, situated knowledge, social context, visual practices

L’intérêt de ce numéro spécial du Building Research & Information consacré au thème ‘Visual Practices: Images of Knowledge Work’ (2007) est qu’il ouvre une fenêtre sur un mode différent et, en quelque sorte, alternatif de la description et de la théorisation du travail des professionnels de la conception en passant par la dimension visuelle du travail de construction; ce numéro spécial offre également une vue plus réaliste des pratiques visuelles. Il démontre que l’activité de conception n’est pas une procédure linéaire composée d’étapes ou de phases; au contraire, la pratique de la conception peut être mieux comprise si on la compare à une chorégraphie sociale et matérielle. Trois thèmes importants émergent. En premier lieu, les artefacts visuels jouent un rôle actif puisqu’ils font que des choses se produisent pendant le processus de construction. Une meilleure compréhension peut empêcher les fautes dues à l’usage d’outils inappropriés. En deuxième lieu, les artefacts visuels ne prennent un sens que lorsqu’ils sont appliqués dans le contexte d’une pratique complexe et désordonnée passant par la compréhension des interconnexions entre personnes, choses et discours. La capacité des matériaux visuels à contribuer activement au processus de conception dépend étroitement du moment où des artefacts différents sont introduits, de leur relation avec des activités spécifiques et de la façon dont ils sont utilisés conjointement avec d’autres outils. En troisième lieu, les pratiques visuelles ont une importante capacité à contribuer à la collaboration de parties et d’intérêts différents, parfois distants, ou à empêcher cette collaboration. Les artefacts visuels peuvent fonctionner comme des ‘objets frontières’, créant ainsi une réponse simultanée aux différentes préoccupations et servant de points de référence communs.

Mots clés: collaboration, communication, processus de conception, échange de connaissances, connaissance localisée, contexte social, pratiques visuelles
Introduction

A typical reaction of social scientists and management researchers when faced with the inherent complexity of the construction industry has been to reduce and simplify. Over the years, the tendency has therefore been to offer explanations based on a single cause, affirming that, in the end, it all comes down to better planning, better communication, trust, or the use of new technologies.

The special issue on ‘Visual Practices: Images of Knowledge Work’ in Building Research and Information (Whyte and Ewenstein, 2007) proposes an alternative and somewhat provocative answer. What if the problem lies in the simplification itself? Could it be that some of the organizational and management problems of this field derive from the fact that reality is biting back at one’s oversimplified understanding of it? What if the tools for thinking are not up to speed with the actual tools of the trade?

In my view, the great merit of the special issue was its presentation of a thick, detailed and hence enlightening (when stripped of some of the social science jargon) view of the visual dimension of construction work. Without avoiding the perils of dealing with complex issues, the special issue aimed to offer an articulated and hence more realistic view of visual practices in construction.

This short commentary will highlight and comment on three important themes emerging from this attempt at providing a more articulated and hence more truthful description of some aspect of construction work. It will argue that the special issue encourages one to acknowledge the following:

- active role of visual artefacts in the construction process while suggesting
- that these tools only come to life when used in practice, and
- that visual practices in construction are critical both at bringing people together and at keeping them apart

The topics are each addressed below in turn.

Visual artefacts make things happen

People involved in construction, not only architects, but also engineers, surveyors, foremen and all others in the industry, know only too well that visual artefacts make a lot of things happen. Yet, as Unwin (2007) reminds us, when it comes to theorizing these artefacts there is a strong tendency to disempower them, making them do only one or two things: mediating and communicating human thoughts. Worse than that, the tendency is often to describe them as passive transmitters of human thoughts, failing to contemplate all the other things that visual materials can and will do for us.

The first merit of the special issue is thus to make a case, or maybe only to remind us, that visual objects are active forces in the work of construction, not in the sense that they have a mind of their own, but in that they make specific things happen. Several of the papers illustrate this, suggesting that materials such as doodles, technical designs, pictures, projections, graphs, etc., do much more than re-present what is in the mind of their authors. Design artefacts are in fact instrumental at expanding, combining, and recording thoughts and conversations, transporting them in time and space, hiding and distorting these thoughts and information in general, convincing and buying-in people, legitimating decisions, authorizing and prohibiting actions, bringing people together and mediating between their different interests, keeping people and positions apart, materializing such agreements or disagreements, and much more.

The observation that one needs to acknowledge the performative power of artefacts is far from being purely theoretical and it has in fact a very important practical consequence. Only by pausing to consider the practical ways in which artefacts enter construction activities and the different types of work they perform can one find out which visual artefacts are better suited for certain purposes and contexts. By furthering one’s understanding of the active nature of these visual artefacts, one can thus prevent the blunders deriving from using tools that are not fit for purpose. This is particularly important in that, as the papers in the special issue clearly show, some of the affordances of visual object conflict with each other.

Consider, for example, one of the key characteristics highlighted by several of the authors, i.e. the open (unfrozen) versus closed (frozen) nature of visual artefacts (Henderson, 2007; Whyte et al., 2007). Several of the contributions in the special issue illustrate that depending on their frozen or unfrozen status, visual artefacts are good at certain things and not others. For instance, open visual artefacts are good at bringing people together and at generating conversation, while they are not so apt at being used for other purposes. Taking a closed design to a meeting aimed at sharing and working together, or using an image in frozen...
way (e.g. by projecting it as a slide) in a brainstorming or consensus building situation might engender a completely unexpected and undesired pattern of interaction (or lack of interaction) that might have serious repercussions both on the session and on the project. The idea that visual artefacts can be more or less frozen suggests therefore that a very fine design, the pride of an architect, and the result of days and weeks of hard workmanship may get in the way, instead of facilitating, the progress of the project: the design is bad because it is good! In a similar way, one might find out that technologies which are supposed to support better ways of collaborating, e.g. through sophisticated computer interfaces, might in fact hamper the collaboration by preventing people from freely modifying their content therefore effectively closing (freezing) the design.

Although I am somewhat simplifying here, the examples provided in the special issue are much more convincing. The lessons from the papers are quite clear that one introduces a hidden variable into one’s work unless:

- one accepts that visual artefacts are active contributors in the different phases of the construction process
- one understands that visual artefacts can make different things happen depending on their nature and characteristics
- one learns what visual artefacts do and how (they are studied phenomenology, so to speak)

By not doing so, not only is one depriving oneself of the possibility of managing the process to one’s benefits, but one expose oneself to all sorts of blunders. Visual artefacts will continue to exercise their silent effect, and one will continue to wonder what went wrong.

**Focusing on practices**

A second important theme emerging from this special issue is that zooming-in on the artefacts tells only part of the story, albeit an important one. Many of the contributions suggest in fact that visual artefacts only become meaningful when they are put to use in the context of a complex and ‘messy’ practice. Visual artefacts emerge and express their performative power only when they are used within a specific activity and in conjunction with other elements. To understand visual artefacts, therefore, one needs to consider how they are used in practice. In other words, the appropriate unit of analysis for understanding visual objects is artefact-in-use, what the guest editors of the special issue call 'visual practices'. Two important implications follow from this.

First, by focusing on the artefacts in use, one gets away from the wrong idea that the affordances of visual artefacts are somewhat inscribed in their nature or essence. One’s attention is then redirected to how visual artefacts work together or in conflict with the other elements that enter the concrete actions which unfold in space and time.

This aspect is nicely illustrated by Henderson (2007) who provides a graphic depiction of the messy interconnections of people, things and discourses that supported the legitimating of straw bale building. The idea here is that the visual materials are part of a complex alliance of human and non-human elements that work together to make this alternative construction technique compatible with the local building code. While visual artefacts played a critical part in the process, their effectiveness cannot be divorced from all the other elements that pushed in the same direction. Like in a political coalition, the strength is in the mutual relationships and not in the individual parts.

The heterogeneous nature of design work is also nicely illustrated Luck (2007), who describes in detail the interactions between an architect, a group of clients, and a set of images and pictures. Luck shows that visual artefacts only express their potential as part of a broader social and technical whole in which discourse (what people say), bodily movements (what people do) and broader institutional expectations (the roles people occupy during the session, the visual culture to which different participants belong) play a crucial role.

The practical import of the seemingly abstract intuition that visual artefacts need to be observed in relation to other aspects of the design activity is finally brought home by Traska (2007) and a discussion of the difficulties of representing an old building in the design process. By analysing a tendering process for the renovation of a listed building in Vienna, Austria, Traska shows the inherent limits of visual representations as ways of translating a building and its history into an architect’s studio. Adding to Luck’s argument, Traska contends that while visual artefacts perform a number of critical tasks, alone they are often weak and powerless. In order to function, so to speak, visual artefacts require a certain amount of work that often remains hidden, what could be called the ‘non-visual work’ necessary for making visual artefacts work. Put differently, while it is undeniable that a picture is often worth ‘a thousand words’, it is also true that pictures and words work together according to a subtle and often unnoticed division of labour. This in turn suggests the somewhat paradoxical possibility that visual practices are by definition not only visual, and that the visual part
is in fact only the emergent part of a much more complex ‘iceberg’.

‘social science is more likely to be of help to the construction community by offering tools for thinking and opportunities for reflection than by formulating generic prescriptions for action’

Second, by focusing on visual practices the special issue brings to the fore the critical importance of process and timing in the deployment of visual artefacts. The capacity of visual materials to contribute actively to the design process strongly depends on when the different artefacts are introduced in the process. This aspect is nicely addressed by both Ewenstein and Whyte (2007) and Bendixen and Koch (2007), who compellingly illustrate that the timing and pace of the use of visual artefacts play a critical role in the design activity. For example, bringing the same extensive set of pictures of an existing building to a colleague who is working on a design or to a formal design review meeting is likely to obtain very different results. The same images can thus be perceived as a suggestion in the first case and as a form of evidential (political) support for the architect’s idea in the second. The difference is not in the object itself as much as in the timing of its use.

The contributors to the special issue thus invite one to abandon the simplified understanding of the design activity as a linear process composed of steps or phases, suggesting instead that one approaches the design practice as a social and material choreography fraught with repetitions, detours, and ‘U’-turns. It follows that to understand design one needs to bring to the fore both the different actors and their performance as well their interaction, turning one’s attention towards understanding the effects of the ‘when’ and ‘how’ the different actors enter and exit the scene, how well all the elements (human and material) work together, and to what extent this heterogeneous assemblage is capable of producing a successful show.

Capacity of visual practices to unite and keep apart
A third important theme emerging from the special issue is the capacity of visual artefacts and practices to support the working together of different and at times distant parties and interests, one of the conditions which make construction so complex and challenging. Many of the papers in the special issue emphasize the capacity of visual artefacts to operate as boundary objects. The idea of a ‘boundary object’ is both simple and fascinating. It captures the intuition that objects which can respond simultaneously to different concerns are particularly good at serving as common points of reference, making different people with different interests interact and coordinate with each other. As each group can attach a different meaning to the same object, these people do not need to think or feel and see things in the same way for them to cooperate. It is the common object which keeps them together, at least until the object remains open or unfrozen enough in the sense discussed above. This view, which again emphasizes the active role that artefacts play in sustaining social relationships, offers a different and somewhat innovative take on such phenomena as collaboration, trust and partnership. Without offering a definitive answer, the papers help one to see that collaboration cannot be sustained on the basis of good will and open hearts only. Collaboration only happens in the presence of a combination of well-disposed people and suitable artefacts and processes. While since the times of King Arthur most of us would be able to answer unequivocally the question ‘which pattern of seating is more conducive to open discussion?’, answering the question of ‘which types of visual artefacts and visual practices does one need to sustain partnership?’ would prove to be much trickier.

This theme, which is addressed by almost all the papers in the special issue, emerges particularly well from Luck’s (2007) discussion of the conversation which occurs during a design review meeting. By analysing in detail the verbal interactions between the participants, Luck shows how a shared understanding of the design emerges during the conversation between the architect and a group of users. The drawings are thus part of the process of participation – an aspect that would become quickly apparent if one imagined a design review without any design.

Luck’s paper, however, is also an interesting example of how the same visual artefact and practices that bring people together also contribute to keeping them apart. In the transcripts reproduced in the paper, the architect is facing a query by one of the end users/clients who argues that there is too much brickwork. This is supposed to be an instance of ‘participative’ design, the user bases her claim on the evidence provided by one of the drawings. In response to this threat, the architect spends several minutes in what is in fact an attempt at de-legitimating the design (claiming in so many words that what you see is not what you get). By discursively reinterpreting and discrediting the visual object like a skilled barrister in court, the architect obtains the double effect of depriving the user of her major ally (the design has been
dis-empowered and so it cannot sustain the user's claim) and re-establishing his distance and superiority based on the (claimed) professional ability of envisioning how the actual building will look like. While the object helps in bringing the architect and the user together by sustaining their interaction, it also becomes the opportunity for reproducing the positional difference and unequal status between the two.

Conclusions
As stated at the outset of this commentary, the merit of the guest editors of the special issue on 'visual practices' and of Whyte and Ewenstein (2007) has to open a window on a different and in some ways alternative mode of describing and theorizing the work of design professionals. Although the papers barely scratch the surface of the complexities of design, they provide a valuable insight into the potential benefits of observing this activity as a social and material choreography in which visual artefacts play an active role. Before concluding, however, it is important to add that the special issue can also be credited with prefiguring a new and refreshing view of how social scientists can contribute to industry. While introducing a new way of studying, describing and theorizing the activity of design, they also put forward the idea that social science is more likely to be of help to the construction community by offering tools for thinking and opportunities for reflection than by formulating generic prescriptions for action. If it is undeniably difficult to manage what one cannot measure, is it certainly more so with what one does not understand.

References

Endnote
'Actually, the architect uses at least two other known tricks for constituting the exchange in unequal terms, so that he can have the upper hand. First, he seizes several consecutive turns in the conversation turning the dialogue into a lecture; and second, he uses the 'power of summary' described by Drew (1992) as the right to pull together evidence and draw conclusions. The outcome of this way of structuring the interaction is that the asymmetry between the professional and the lay person is re-established and the architect has his way, while the user ends up almost apologizing for threatening to breach the existing institutional order.'