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“TAKING OFF MY GLASSES IN ORDER TO SEE”: EXPLORING PRACTICE ON A BUILDING SITE USING SELF-REFLEXIVE ETHNOGRAPHY

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There has recently been a growing interest for ethnographic studies in construction. This interest is predicted upon the belief that ethnographic research to the construction industry can provide a powerful way of illuminating construction practices in new ways. The purpose of this paper is therefore to explicate how ethnography could be used to answer research questions in construction. Drawing on rich empirical data from a field study where the researcher went native, working as a dogsbody on a building site, this paper illustrates how the researcher first battled contrarious roles, only to realize that the transforming perspectives were the true resource. The paper presents the practices on the building site from an observer perspective and a worker perspective respectively and concludes that a self-reflexive ethnographic approach can account for the variations, contradictions, and tensions embedded in the practices of construction.

Keywords: ethnography, field study, self-reflexivity, identity, construction practice.

INTRODUCTION

While ethnographic research in construction has remained relatively rare there is now a growing interest in and awareness of the utility of an ethnographic approach to the construction industry (Pink et al. 2012). Those that are advocators of more ethnographic research in construction argue that it can provide a powerful way of illuminating construction practices in new ways (Gherardi and Nicolini 2002; Bresnen 2009; Pink et al. 2012). Until recently there has been relatively little emphasis on theory generation around the actualities of construction practice, rather a defining characteristics of construction research has been an apparent reluctance on the part of many researchers to embrace the interpretative and qualitative methods more generally (Pink et al 2012; Phua 2013). Building sites have been described as being chaotic, complex, and in constant flux (e.g. Cicmil and Marhall 2005; Ness 2010), constituting an “ad hoc environment” that is rapidly changing in temporal and spatial dimensions, and therefore often requires unpredictable configurations (e.g. Groák, 1994). It has been argued that those workers engaged in this reality rely heavily on practiced-based learning rooted in, and between, single individuals rather than in technical and managerial systems (e.g. Styhre et al. 2004; Knauseder 2007) Many aspects of the particular practices of a building site would therefore seem to benefit from research methods that allow the researcher to collect data and experience amidst the actual practises as they unfold. Specifically, a deeper understanding of the “realities” and lived experiences of those within the industry can contribute to deeper insights into the ramification of socio-cultural systems by the capturing of significant variations, contradictions, and tensions (Löwstedt and Räisänen 2012) and would

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enable problems to be reframed in ways which account for both specificities of the context to which they relate and the socialities and materialities and experiences through which they unfold (Dainty 2008; Pink et al. 2012).

In relation to this, the purpose of this paper is to explicate how ethnography could be used to answer research questions in construction. More specifically it explores how a self-reflexive approach can provide complementary perspectives on the practices of a 'field'. Based on rich empirical data from a field study of a building site the researcher here reflects on how insights from both an observer role and a worker role respectively can account for the variations, contradictions, and tensions of the practices of a building site.

ETHNOGRAPHY, FIELD STUDIES, AND SELF-REFLEXIVITY

Brewer (2000:10) describes ethnography as “the study of people in naturally occurring settings or ‘fields’, by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally” – i.e. ethnography is “telling it from the inside” (ibid. pp.17). Ethnography is not one particular method of data collection but rather a style of research that is distinguished both by its objectives and its approach. The objectives are to understand the social meanings and activities of the people in a given ‘field’ or setting and its approach involves close association and often participation in the fields (Brewer 2000). In ethnographic research these ‘fields’ are seen as socially constructed realities and ethnographic research is therefore by nature qualitative (Dent, 1991).

Brewer (2000) argues that “ethnography” sometimes has been used as a synonym for qualitative research as whole, and virtually describes any approach as ethnographic that avoids surveys as the means of data collection. He therefore proposes to distinguish between “big” ethnography or “ethnography-understood-as-the-qualitative-method”, in which ethnography really is a perspective of research rather than a way of doing it, and “little” ethnography to mean the same as “field research” or “ethnography-understood-as-fieldwork” where ethnography instead means a particular way of doing qualitative research (ibid. 17-18). It is not so strange, however, that field study often is equated with ethnography. Ethnography is after all concerned with understanding people in their natural occurring settings and field study is a particular research methods that provides the researcher with route to understand “local” knowledge in ways that is not accessible through standard interviews or focus group methods (Tutt et al. 2012).

However, field study, or “little” ethnography, is still not all that small. Field studies involve judgments about: the object of the research, which is to study people in naturally occurring settings; the researcher’s role in that setting, which is to understand and explain what people are doing in that setting by means of participating directly in it; and the data to be collected, which must be naturally occurring and captured in such a way that meaning is not imposed on them from outside (Brewer 2000: 18). The data naturally consist of descriptions and accounts provided by the people in the research site, together with the researchers observations on activities and interactions and the context in which they take place. The researcher, in general, does not seek to test a prior hypothesis. Rather, he or she seeks to theorize through the data

in an inductive manner. Analysis of the data is itself an emergent process. The researcher seeks gradually to develop an empathy with the data, to understand what they tell of people's realities and the process through which they unfold (Dent 1991). This involves direct and sustained contact with the people, within the context of their daily lives, watching what happens, listening to what they say, asking questions, and producing a richly written account that respects the irreducibility of human experience and that acknowledges the role of theory as well as researcher's own role (O'Reilly 2005:3). It is therefore very important that the researcher has a reflexive awareness of her or his specific field study is informed by and builds on theory and then self-consciously considers how theory and practice remain in dialogue through the research process – i.e. in order to understand the precise meanings of research findings, it is also important to attend to the ways that ethnography is informed and the precise meanings of the concepts engaged in its production (Pink et al. 2012:8).

It is therefore increasingly common for contemporary ethnographic field studies to deploy a self-reflexive approach, wherein the author explicitly considers how their status, background, and experience influence the research process (Clifford and Marcus 1986; O'Reilly 2005), however, construction researcher have seldom adopted a self-reflexive approach to writing: the subjective 'I' is mostly absent in writing within construction research journals and books, hence the position of the author, and their identity, remain unknown to the reader and unexamined by the author (Sage 2012:93). Sage (2012) argues that those small number of works in construction that actually has used a self-reflexive approach to ethnography, have treated their own identity as a given when self-reflecting and have given rather little explicit consideration to how their own ethnographic identity are been cultivated and transformed across the research process. In the reporting of his field study in construction, Sage (2012) therefore adopts a more engaged approach to an ethnographic field study and reports back on how his own identity changed throughout the field study. He argues that it is important to accept and reflect on the way your own identity transforms as you engage in a field study. In a similar manner, this paper is using a self-reflexive approach in order to account for how the researcher's own identity transformed throughout the field study. The following parts of this paper are therefore written in such style for the reader to get to know the subjective "I" of the researcher.

THE SETTING

This paper is based upon data from a four weeks long field study at a construction site. The construction site project was operated by a large construction company here referred to as Alpha and comprised of the construction of 40 residential apartments allocated between two separate buildings. I got access to the site first through an initial contact with a regional manager at Alpha, and then via a district manager that in turn directed me to the site manager of the aforementioned project. As common for ethnographic approaches I was not seeking to test any prior hypotheses (Dent, 1991) with my field study but rather to explore practices on a construction site as they emerged before me, and the purpose I duly stated for admission was "that I wanted to learn how it works out on an actual construction site". I entered the site in January 2014 by which the project was about 70-80 percent into its projected progression.

My strategy for the field study was to try to actively participate in the day-to-day activities as much as possible. I regarded this an eligible strategy for many different

reasons. One reason was that this seemed to be the best way to study the setting in such a way that meaning was not imposed on it from outside (Brewer, 2000), i.e. rather than my presence being associated with someone that observed I wanted to try to blend in by working like everyone else. As it turned out, this strategy proved to work even better than expected. On the first day I was given a set of working clothes and safety gears to wear just like everyone else on the site. The safety helmets that you wore on site followed color-coding that indicating the rank you had on the site. I learned that the site manager and the site leaders wore white helmets, the construction workers blue and the apprentices and visitors red. I wore a red helmet which turned out to be a great advantage if you wanted to blend in on the site. There were about 15-20 apprentices on site, and there was also a large number coming and going from week to week. I realized that many faces were new for others as well and not everyone knew everyone's name, and coupled with all the visitors on site also wearing the red helmets I felt that my presence on site passed rather unnoticed.

TRANSFORMING IDENTITY: BEING OBSERVER/BEING WORKER

Another reason for the strategy to actively participate in the construction work was that I imagined that my understanding of the practice of a building site would be more profound if I had tried to practice it myself. This ambition to actively participate got fulfilled by a large margin, in fact, it merely took a few days for me to be fully assigned with work. Initially this work mainly consisted of carrying and moving various material and tools as well as a lot of cleaning and clearing up. It could be for example, moving large piles of building timber from one place to another (\approx 4 hours), throwing plasterboards away for disposal (\approx 1,5 hours), carrying parquet between different floors in the building (\approx 2 hours), or cleaning out apartments before an ensuing filling (\approx 1 day). I learning from the site manager that it was common for apprentices to get these more "boring" tasks in the beginning. I felt that the construction workers really responded to the red helmet I was wearing because I could hardly go anywhere on the site before some construction worker asked me to do some work. However, in due time I was assigned to do "real" construction work as well. I don't have any construction background at all but I accepted every task that was given to me and it turned out well. Before the end of my field study I had actually performed most of the task that a regular construction worker do on a building site, for example measuring, sawing and putting up beams in an outdoors storage room, screwing plasterboards, putting up boards with a nail gun, doing decision founding range measurements with laser, putting out clinkers, be in recipient of deliverances, and directing a crane operator.

There were several motivational factors for me to focus on the task given to me and to perform my utmost. First, I didn't want to make any mistakes that could draw attention to me. Second, I wanted them to recognize that they could trust me with the tasks they gave me in order for them to give me more without having to think twice about it. However, I also realize now in retrospect that a significant motivational factor for me focusing on the work given to me also was grounded in myself – as a person in this world. I am a very competitive person by nature, I want to perform well regardless of what I do, and I furthermore found myself to really enjoy doing the work that they gave me.

All these circumstances progressively transformed my identity on the site, from being an observer foremost to being a worker foremost. While this was the initial ambition I

also reflected on that my worker role occasionally grew out of proportion, to an extent that it inhibited the grand purpose of the study. Some days I was so deluged with construction work that I had no time to take any field notes, or no time for any reflections besides the work right in front of me. I also realized that while carrying piles of lumber all alone for four hours would make me useful on the site, it could hardly provide me with much useful data on the construction practices.

In the due course of these four weeks on site I was constantly pulled into a worker role, which I actively had to step out of in order to be able to observe. While all this was on going I thought of this constant flux between the observer role and the worker role as nothing else than a big problem. However, now in retrospect I realize that this transforming perspective was a true resource.

RESULTS

In this part I present two aspect of the practice of the building site – from two different perspectives: the observer perspective and the worker perspective respectively. A concluding discussion will then argue that these two perspectives can complement each other to account for the complex variations, contradictions, and tensions of the practices of a building site.

“PLANNING ON THE SITE”

Observer perspective

My overall impression from observing the practices on the building site was that they were characterized by little systematized control and planning. Even where there were plans, it seemed like no one seemed to pay too much attention to them. The practices on the site seemed rather to be characterized by ongoing reactive and person-based problem solving.

A typical episode could be:

Two construction workers come to talk to the site team leader about how to construct a stair. The team leader starts to explain to them. At first they don't understand him, but soon they do. One of the workers says to the team leader: “You just thought of this now didn't you” and the team leader seems delighted and smiles “Hell, yeah”. This dazzled me and when the workers left I asked the team leader if there really was no construction plan for the stair. Team leader “No, no, no”. Another team leader overhears this and says “Come on, of course there is a construction plan for the stairs” Team leader 1: “No there isn't” Team leader 2” I know for a fact that there is” Team leader 2” Ok there might be one...but you know that there is a reality also right?”

This made quite an impression on me and the next day I asked the team leader how the building process progressed – “if everything was going according to plan”:

Team leader: “I really don't know” Me: “Don't you have any plan?” Team Leader: “No...I mean I don't feel like I should have to sit and plan...I did one plan in the beginning but I mean that was flawed the very first day already...and then I didn't feel like siting down and do yet another one.”

This approach towards plans and planning was not only a characteristic of this particular team leader, but typical for all the construction workers on site. It involved

both planning of the building process, as well as the specific building plans. In general they seemed very skeptical towards the building plans and the architects that made them: “they don’t know about reality”, “they can’t be trusted”, “it is almost always something wrong” and a common practice for them was to incorporate their own personal solutions instead and “just solve it”. They usually communicated this to the team leaders only after they had solved it: ”The plan said that ...but that was no good because...so we did this instead...”

I have no construction background myself, so I could never decide whether the plans were flawed or not. But I observed a constant skepticism and indifference towards the plans, and not only did they seem to assume that the plans were wrong, but I could also sense that they wanted the plans to be wrong – so that they would get to use their own person-based problem solving. Because there seemed to exist a collective pride related to the craftsmanship and the particular of being a good “problem solver”. My inference when observing this was that this pride consequently affected their attitude towards plans and planning.

Worker perspective

As I progressively transformed into the worker role by my active participation in the construction process I also progressively started to think of plans and planning in a different way. After working on the site for a while I could sympathize with their skepticism and reluctance towards plans. I realized that no plan could in detail account for the high degree of unpredictability embedded in the building process; the complex chains of dependencies and variations in between social interactions, materiality, and the unpredictable physical environment, etcetera.

The following is a very typical episode of me working on the site:

One of the team leaders assigned me with the task to receive a shipment of window frames in marbles. My task description was to be at the deliverance spot, review the shipment, sign off, and then just pile up the frames outside the building. However as I arrive at the spot it starts to rain, the delivery guy informs me that it wouldn’t be good for the frames to lie out in the rain. Since the frames are very heavy and the space very limited inside the building, I didn’t want to risk carry them all to any inconvenient spot, so I decided to go and find the team leader to ask him where I should put them.

I look for him for about 15-20 minutes and finally I find him in the second building on the fourth floor. He tells me: “I don’t know.... You have to put them wherever there is room”. I go back to the first building and look for a place on the first floor but the flooring isn’t done in those apartments there. I ask the worker there when he will do the flooring, to know whether I could stack the frames there or not. He tells me that he don’t know, that he needs to wait for the filling to be done first and he don’t know when, but that it should be that afternoon. So I go to the second floor. It is kind of chaotic there because a shipment of doors has just arrived and someone has just stacked them in the stairwell, so there is no room for me to access any of the apartments on that floor. So I go to the third floor. There the flooring is done in one of the apartments so I decide to put the frames there and I go down and start to carry them. When I am about half way through one of the workers stops me and asks me if I could carry the frames to the fourth and fifth floor instead, he tells me that he is the one that is supposed to put them in place and ask me if I could carry each one of them directly to the rooms where they are supposed to be put in place. I say yes, no problem. However when I arrive at the fourth floor carrying one of the heavy frames with me I see that there are cabins standing everywhere and blocking the rooms. It was the floor dresser on that floor that had moved them there because he needed room in the kitchen where he was putting in floors. So, I had to

carry the frame back down again and put it back where it was before. I then tried to find the worker to inform him that there was no room for the frames where he wanted them – but I couldn't find him. Then I tried to find the team leader to inform him where I had put the frames in the end – but I couldn't find him either. And then I forgot to tell him when I saw him, and he never asked.

This episode is very typical for the practice on site. It illustrates the constant negotiation of onsite space and time and the effect the physical environment can have on the sequences of events; here for example, it suddenly starts to rain. It also illustrates how complex and juxtaposed all the micro processes are and how hard they are to overlook. The team leader did not know where to put the frames; and he didn't know where I put them in the end; he also didn't know that one of the workers needed them on the fourth floor; and that worker, in turn, didn't know that there were standing cabins where he wanted the frames and he also didn't know where I put them in the end; and he could only start to put them in place after he found them; and after the floor dresser was done on that floor – and so on.

From a worker perspective, the unpredictability of the building process seemed to spring from the aggregate of a myriad of episodes like this.

“SAFETY ON THE SITE”

Observer perspective

On the very first day I entered the site I was given a safety introduction by one of the team leaders. This introduction was mandatory and was given to everyone that was going to spend time on the site, including every subcontractor and visitor. The introduction took around 10 minutes and included pretty much what I expected from a safety introduction, i.e., there was no surprises; no more than expected, and no less.

One thing that was stated in the safety introduction was that it was mandatory for everyone on site to wear all the safety equipment at all time, including the helmet, the glasses, the jacket, the shoes, and the gloves. This was also stated on signs that were put up on the fence that confined the building site area, and on the doors of the building barracks.

Observing the workers on site I noticed how this regulation was breached time after time. The helmets were on the majority of times, however, the jackets, the gloves, and the glasses were taken off countless of times. At one occasion I asked the team leaders about this and they seemed to have rather different opinions on the matter, one of them was expressing indifference and the other frustration:

Team Leader 1: “We have more important things to think about”

Team Leader 2: “Yeah, but if you didn't have to nag about it all the time like some other kindergarten teacher...then you would have time for the more important things”

At this point I could see that the safety regulations weren't followed, but I wasn't sure about the reasons, and even when I asked I couldn't get univocal answers. I heard reasons like “forgetting”, “not important”, “yeah, yeah...I know”. My initial inference was that this was related to and embedded in the macho culture that I observed on the site. However, when looking from a worker perspective I managed to see other things as well.

Worker perspective

In one of the first days I was asked to move large piles of parquet floors from one floor to another. There were quite heavy and it didn't take long for me to start to sweat heavily. In addition to the heavy workload and the warm safety jacket, there were also hot fans running in the apartments and in the stairwell. The buildings were built in concrete and these fans were placed there to help the concrete to dry out, which it needed to do as fast as possible because other building sequences depended on it. However all of this made it incredible hot and I had to take my jacket off. Then I also started to get mist on the inside of my glasses. And I therefore had to take my glasses off – in order to see. I kept doing this when I needed to and I learned that everyone did this and that the group accepted it.

What I also learned during these weeks is that it hurts to be a construction worker. Doing work in the chaotic environment, with stuff laying around everywhere, it seemed unavoidably to get hurt. During these weeks: I tripped on an electric cable on the floor and fell into a metal bar and hurt my elbow, walked into an electric cabinet and hurt my knee, somehow managed to stick my thumb into a hole in a wall and twist it, got a large wooden beam on my arm when sitting and screwing leaving me with a large bruise on my arm – this could easily have been much worse, because it was falling towards my neck and one of the workers screamed at me and I could just barely get my arm up in time. By experiencing it from a worker perspective it became very clear to me that a safety introduction alone could not do much in regards to preventing accidents, as long as a building site is what it is.

DISCUSSION AND CONCLUSIONS

The results reported in this paper describe how my own “ethnographic self” transformed and fluctuated between being an observer foremost and being a worker foremost while doing a field study of a building site. Czarniawska stated (2007: 21) that: “An observer can never know better than an actor; a stranger cannot say more about any culture than a native, but observers and strangers can see different things than actors and natives can”. This can be seen as both the strength and the weakness of the observer perspective; while it might be easier for an observer to see new things in a ‘field’, it is definitely harder to see the same. The observer perspective and the worker perspective presented in the result section are simplifications. In reality they are approximations and overlapping subspecies of each other. However, they serve well to elucidate how self-reflexivity and different perspectives can account for the complex variations, contradictions, and tensions of the practices of a ‘field’.

The team leaders and the workers discussed planning in terms of a “timewasting” activity and they expressed a lack of trust in what any plan would “know about the real reality of a building site”. This could, from an observer perspective, be interpreted as relating to the rather chaotic environment on the site (a causal relation). However, by working on site myself and experiencing the constant negotiation of time and space (e.g. Groák, 1994) I gradually started to sympathize with their (limited) planning practices, because, from a worker perspective a scepticism towards plans seemed to be a consequence of, rather than a cause of, the specific circumstances on the building site. By the same token, from observing the workers on site I could discern a certain culture resisting the use of the safety workwear and overall precaution. This is

something that has been concluded by many researchers in construction before (e.g. Gherardi and Nicolini 2002; Dingsdag et al. 2008; Ridley and Channing 2008). However, when I started to transform from being an observer foremost into being a worker foremost other insights regarding the safety on site emerged before me. During these four weeks on the field I did also take my safety workwear off at several occasions, however this had nothing to do with the culture on the site. The reference “taking my glasses off in order to see” in the title of this paper has therefore both a figurative and a literary meaning. By taking my “observer glasses off” and entering into a self-reflexive participating mode I could see that I was taking my safety glasses off because of the specific circumstances on the site, and by constantly hurting myself while in the worker role, I could also see that no safety introduction or safety culture could *alone* much prevent accidents from happening as the risks are also more broadly embedded in the actual circumstances of a building site.

Pink et al. (2012) maintained that taking an ethnographic approach in construction is a powerful way of illuminating construction practices in new ways and that it would enable problems to be reframed in ways which account for both specificities of the context to which they relate and the socialities and materialities and experiences through which they unfold. Drawing on data from an ethnographic study in which the researcher could experience the practices on a building site as they unfolded, this study has elucidated the tension and contradictions that exist between socialities and materialities within construction practices, i.e., the impetus for practice in construction is embedded in both its culture and its industry-specific circumstances, and can therefore not be explained using only either one of them.

Self-reflexivity in ethnographic studies has mainly been depicted as an approach by which the researcher considers how their status, background and experience influence the research process (cf. Clifford and Marcus, 1986; O’Reilly, 2005). In this respect self-reflexivity is mainly concerned with how the researcher’s presence is affecting the studied ‘field’. However, self-reflexivity could also be an important part of the research results. Sage (2012) illustrated how his transforming identity on the field increased his understanding of the researcher/researched relationship – and this study has illustrated how my own self-reflexivity, in itself, helped to increase my understanding of the practices of a building site, and hopefully this can serve as an enticement for the use ethnographic methods to answer research questions in construction.

REFERENCES

- Bresnen, M (2009) Living the dream? Understanding partnering as emergent practice. “Construction Management and Economics”, 27(10), 923-933.
- Brewer, J (2000) “Ethnography”. McGraw-Hill International
- Cicmil, S, and Marshall, D (2005) Insights into collaboration at the project level: complexity, social interaction and procurement mechanisms. Building Research and Information, 33(6), 523-535.
- Clifford, J and Marcus, G E (eds.). (1986). “Writing culture: The poetics and politics of ethnography”. Univ. of California Press.
- Czarniawska-Joerges, B (2007) “Shadowing: and other techniques for doing fieldwork in modern societies”. Copenhagen Business School Press DK.

- Dainty, A (2008) Methodological pluralism in construction management research. "Advanced research methods in the built environment", 1-13.
- Dent, J F (1991) Accounting and organizational cultures: a field study of the emergence of a new organizational reality. "Accounting, Organizations and Society", 16(8), 705-732.
- Dingsdag, D P, Biggs, H C and Sheahan, V L (2008) Understanding and defining OH&S competency for construction site positions: Worker perceptions. "Safety Science", 46(4), 619-633.
- Gherardi, S and Nicolini, D (2002). Learning the trade: a culture of safety in practice. "Organization", 9(2), 191-223
- Groák, S. (1994) Is construction an industry? Notes towards a greater analytic emphasis on external linkages. "Construction management and economics", 12(4), 287-293.
- Knauseder, I (2007) "Organisational learning capabilities in swedish construction projects", PhD-thesis, Chalmers University of Technology.
- Löwstedt, M and Räisänen, C (2012) 'Playing back-spin balls': narrating organizational change in construction. "Construction Management and Economics", 30(9), 795-806.
- Ness, K (2019) Bringing order to chaos; the management of construction projects. In the "5th Making Projects Critical Workshop", 20-22 January 2010, Bristol Business School.
- O'Reilly, K (2005) "Ethnographic Methods", London: Routledge.
- Pink, S, Tutt, D and Dainty, A (eds.) (2012) "Ethnographic Research in the Construction Industry". Routledge.
- Phua, F T (2013) Construction management research at the individual level of analysis: current status, gaps and future directions. "Construction Management and Economics", 31(2), 167-179
- Ridley, J and Channing, J (2008) "Safety at work". 7ed. Oxford: Butterworth Heinemann
- Sage, D (2012) The trials, tribulations and translations of an ethnographic researcher in construction. In: Pink, S., Tutt, D., and Dainty, A. (eds.). "Ethnographic Research in the Construction Industry". Routledge.
- Styhre, A, Josephson, P,E, and Knauseder, I (2004) Learning capabilities in organizational networks: case studies of six construction projects. "Construction Management and Economics", 22(9), 957, 966
- Tutt, D, Pink, S, Dainty, A and Gibb, A (2012) The communication practices of migrant workers in the UK construction industry. In: Pink, S., Tutt, D., and Dainty, A. (eds.) "Ethnographic Research in the Construction Industry". Routledge.