SHAPING THE SOCIALLY DEFINED ARTEFACT– A DESIGN PERSPECTIVE

LORENZ HERFURTH

LANCASTER UNIVERSITY

L.HERFURTH@LANCASTER.AC.UK

This conceptual working paper communicates findings from a research project which is designed to further the understanding of consequences for design when organisations themselves are understood as artefacts. I set out to learn from real-world practice what it means to shape a social artefact – an organisation. Based in notions of organizations as human made artefacts and the extended application of design to social contexts, this research inquires into ways in which stakeholders participate in processes of organising.

Firstly I will give a brief overview of the dilemma we face when defining an organisation as artefact with specific, design relevant attributes. Secondly, this artefact is changing towards less clearly defined structures (Balogun & Johnson 2004; Taylor 2011). As I will refer to below, these changes are relevant when considering the relationship between design and the organisation. Scholars have proven that design and design thinking can help inform and shape core functions of an organisation, like a.o. management (Boland & Collopy 2004), strategy (Liedtka 2004) or change (Junginger 2008). Still, it seems that these debates assume a rather monolithic understanding of organisations.

The research I am presenting is qualitative and makes use of a mix of methods within this paradigm. Two case studies provided a real-world context of distributed and emergent organisational structures. Based on assumptions derived from an initial phase of grounded data analysis, I am using two specific themes to find out why and how people design the social activity of shaping an organisation. Motivation and intentionality are used as design-relevant concepts to identify dimensions of design in the social process of shaping organisations. This thematic approach to data analysis is based on notions within Human-Centred Design theory (Krippendorff, 2008).

Conclusions are intended to form a discussion, rather than constituting clearly determined findings. Applying the concepts of motivation and intentionality to an organisation that is formed around a project, has enabled me to identify indicators for and effects of design on organisational shapes. This, as one might assume, opens up new questions and dilemmas for

participatory design approaches, which I am offering as routes for further discussion and research.

This paper represents work in progress at a point where a first sample of primary data has been collected and a first analytical attempt has been concluded. Therefore this paper should be read as a working paper, which intends to provoke new ideas and suggest indicators for ongoing further in-depth exploration of the reality in which people organise.

ORGANISATION AS ARTEFACT

I do not primarily regard an artefact as a result, product or final state, but more as a concept that acknowledges an organization's position in the realm of the artificial, the human-made world.

Looking at an organisation as an artefact on the one hand acknowledges the human-made process that brings organisations into existence (Rollinson 2008) and the possibility that an organisation is a product of human action (Junginger 2008). On the other hand it raises questions with regard to the core properties of this artefact, as it is rather different from other artefacts of physical or digital nature. One of the paradoxes is that an organisation is made by but at the same time 'consists' of humans. Therefore I will refer to organisation in the following as a 'Socially Defined Artefact' (SDA), an artificial product, 'a fabric made out of communication' (Taylor, 1988 in: Taylor 2011, p. 1275), a result of social interaction. The term Socially Defined Artefact is intended to not only capture the way an organisation differs from other artefacts, I also want to prevent confusion with the concept of "Social Artefact" as it is used in Science and Technology Studies (Pinch & Bijker 1984; Nemeth et al. 2006).

Current developments in organisation studies point towards changes of this artefact. Specifically with regards to organisational structures, from rigid hierarchical organisation to distributed and emergent structures (Balogun & Johnson 2004; Taylor 2011). In contrast, the application and relevance of design thinking to managerial contexts can be interpreted as being based in an understanding of organisations as closed systems. Systems with a boundary and clearly articulated points of interaction with the outside world

(i.e. users, consumers, society) closer related to Simon's concept of an interior and exterior environment (Simon 1996).

These developments have been considered while choosing two cases which represent a distributed, less formalised organisational setting. Both have a temporarily limited lifespan as they are formed around projects. Furthermore, different organisational entities have to collaborate in partly emergent and changing settings, by forming new constellations outside their 'nominal boundaries' (Rollinson 2008, p.4). Here the occurrence of established and emergent (project related) organisational structures provides a rich sample for inquiry into interactions and relationships between individuals, groups, communities and institutions.

HOW IS A SOCIALLY DEFINED ARTEFACT SHAPED?

This paper contributes to track 3 by looking at the social process of organizing that forms the basis of collaboration for a variety of purposes, from product or service innovation to art performances. The overall research aim is to better understand the principles and mechanisms employed during this process. This is explored in a first research phase, which this paper is based on, through the perspective on "why" people participate or are being involved – their motivations. Further, identifying different degrees to which this involvement is consciously intended, considered or neglected might allow me to further unfold the "how" of stakeholder participation. Research questions therefore are:

- What are the underlying motivations for people to get involved or involve others in processes of organising and how do motivations develop or change throughout a project?
- How is this motivation reflected when looking at the way people shape the involvement of others?

These questions are closely related to what designers do – they shape artefacts, experiences and systems (Buchanan 2001). As design problems developed from the realm of the first two orders of design (2d and 3d artefacts), as described by Buchanan (Buchanan, 2001), towards messy social systems and wicked problems (Rittel & Webber 1973), the social context design operates in became more important.

For example Human-Centred Design (HCD) has emerged as a participatory design approach that developed from facilitating organisation-user relationships for software development (Norman and Draper, 1986), to a strategy that addresses organisational change (Junginger, 2003).

In the following I will briefly introduce concepts of intentionality and motivation from the HCD-discourse that form the underlying basis of design understanding for thematic data analysis.

Krippendorff (2008) understands motivation as justification of action. Extrinsic motivation then is the dominant form in our society, justifying engagement in activities through external, goal-driven standards, such as performance. Intrinsic motivation on the other hand drives engagement without 'reference to an outcome, achievement, or result' (Krippendorff 2004, p.3). Features that are 'intrinsically motivating' comprise amongst others interactive rather than tangible qualities of artefacts, they 'require a considerable level of skills and challenges' (p. 6) and they inspire a sense of control.

To create 'optimal experiences' (p. 11), he argues, it is necessary for design to refer to the intrinsic dimension of motivation in order to identify the essential aspects of a design that make experiences meaningful to individuals.

With respect to the design of meaningful experiences, he identifies two types of intentional design: purpose-driven design for him is an approach that emphasizes a separation of an artefacts function from the context that creates the meaning and attributes of function to it. Human-centred design on the contrary respects that 'behavior and understanding' are closely linked. As Krippendorff states: 'Humans do not respond to the physical qualities of things but to what they mean to them' (both p.8).

While Krippendorff uses intrinsic and extrinsic motivation to exemplify different modes of engagement with things, I am interested to find out whether these concepts will maintain their relevance when applied to the Socially Defined Artefact. .

METHODOLOGY

Small sample qualitative multi case study research (Stake 2005) was chosen as research strategy. It looks at innovative, new ways to engage others in project organization. Planned and opportunistic approaches to inquire into real world contexts were combined to attain in-depth insights into subjective perspectives and ways in which individuals make sense of their role in the process of organizing. Analysis is in parts grounded, as well as thematic, it acknowledges the role of the researcher in the analysis and interpretation of data and consequences and limitations that thereby arise with regards to transferability of results. The data for both cases was collected from primary and secondary data sources. As the character of inquiry into each project differed – on the one hand a retrospective study on the other an opportunist observation of a live project – methods used span retrospective interviews, live conversations, audio and video recordings, observational as well as reflective research notes and the study of third party documents such as meeting notes and a debriefing report.

Limited validity of data is a concern with referral to the large quantity and specialised quality of data collected and the potential randomness caused by reliance on the

researcher's own interpretation (Stake 2005).
Still, Eisenhardt (1989) argues, that validity of case study research is inherent in its structure. As she states , hypotheses emerging from this process have already been subject to an iterative process of moving back and forth between data, construct and existing theory in literature (Easterby-Smith et al. 2012, p.56). Eisenhardt refers to this process as "repeated verification" (p. 547).

THE CASE STUDIES AND THEIR ANALYSIS

Two examples of temporary organization were chosen for multiple case study research. Both are creative design projects, but differ in the set of stakeholders and organisations involved as well as in the purpose and process (see fig. 1) of organizing. While one case is a retrospective study of an architectural construction project for a higher education institution (HEI) in the UK (construction project), the other is a live study of a mass participation music performance that took place in a major UK city (art project). Further, roles of stakeholders and participants in both projects differ. While the construction project involved a professional distinction between designing and organising (i.e. architect and project manager), the art project, combined both in the role of two artists who initiated and ran the performance. Still, in both cases, besides the professional allocation of responsibilities, the researcher's interest focused on the occurrence of design activities beyond these professional roles.
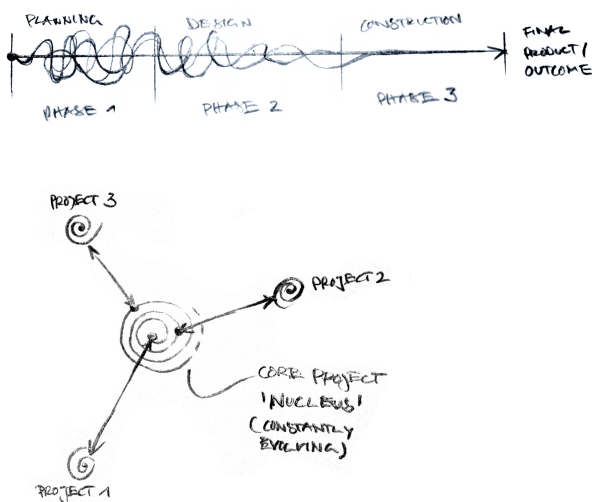

Figure 1: linear process (construction project) versus a circular process centred around a 'nucleus' (art performance)

While the construction project can be separated into planning, design, construction, completion and use stages, the art performance was a far shorter, two day endeavour, compared to an eight month overall construction process (construction project).

As the analysis of data has not been completed yet and this paper represents work in progress, the discussion is centred around findings from thematic analysis and a first, grounded approach to data analysis.

Analysis was partially grounded in the way that an approach was chosen that prioritises an understanding ermergent from the data itself rather than applying a specific concept to identify themes accordingly. However, the previously introduced understanding of intrinsic and extrinsic motivation is used in the following sections to discuss findings and create a narrative that combines the two cases and enables me to build an argument in respect to already published knowledge. With regard to data verification it borrows from the theory-building process described by Eisenhard. Here the intention to build theory from data (Eisenhardt 1989) is followed by the verification of assumptions based in primary data with themes in literature.

MOTIVATION IN CASE STUDIES

With regard to the performance project I understand intrinsic motivation in this context as the interest in the activity of creating a musical experience itself without an external gain or incentive, such as a financial reward i.e. or professional qualification. Participants' motivation can be characterised as intrinsic, as driven by the motive to do something different, to contribute to something other than their usual music performances. This became clear through the statement of a member of the involved brass band in a conversation during the performance.

Extrinsic motivation was driven by an   research project this performance contributed to. As the artists mentioned during an interview held after the performance, all of their participative art performances contribute to a body of knowledge that intends to answer their research's central questions around music performances and the breaking down of classical hierarchical structures within. driven. Further, extrinsic motivation is being expressed by organisers, being driven by the pressure to create a successful event, represented in a large number of participants as well as spectators.

This project was not successful in realising an intended organisational shape, which was articulated in the initial communication with participants. As the comparison between an initial email sent out to potential participants by festival organisers (see quote below) and the actual number of participants (see figure 2) shows.

"We will stage a 'dress rehearsal' with the other groups that are involved (possibly up to 150 people in total!) before the performance (…)"

In another, newsletter-type of email sent out by the organisers works of the involved artists are being described as 'huge-scale':

'The results are huge-scale immersive and meditative performance-installations, within which audiences can freely move about or sit and absorb.'

In contrast to the intended turnout (150 people) for the rehearsal, the picture below shows the actual group of

participants who showed up for the final performance. Ten musicians took part of whom one was an individual musician while the other nine were members of an already existing, local brass band.

Figure 2: final participation differed significantly from intended

Not only can the contrast between intended and actual turnout be considered a failure of engaging potential participants, internal documents authored by the festival organisers further reveal their disappointment with the performance.

'The expectations for the project were not met, mainly due to breakdowns in communication, lack of staff time/ resource and difficulty recruiting performers. (…) Considerable damage may have been done to the festival *reputation'* (name of festival removed, the author).

As for the construction project, intrinsic motivation for involvement is related to the original, initial drive to create more space for students, to accommodate more space for teaching. The initial group set up on a departmental level was not driven by external pressure from other parts within the organisation but came from the direct experience of those involved with teaching that space is needed. This might be a slightly different interpretation of intrinsic motivation as it has a purposeful aspect. Still within an institutional setting, such as an HEI, this can be interpreted as rather intrinsic, as no external rewards had been offered to those who participated in the initial meetings.

It can be said though that over the development of the project those who intentionally organised themselves were less involved as the process was taken over by professionals with skills which are needed in the design and accomplishment of a construction project. The motivation for involvement became more complex, determined by a set of drivers apart from the initial motivation to create new, more space for students. These drivers were financial resources, technical requirements and construction expertise amongst others.

As figure 4 shows, as the planning process moved on to the actual design and construction phase, responsibilities and motivations to participate in the process moved away from the initiators of the project on faculty and departmental level to professionals and controllers with specific, purposeful skills, such as administrative roles and technical expertise. This development is represented in the map by a development towards more complex structures of

meetings and groups that include decision makers from different parts of the HEI and professionals from outside the institution. The dominant decision making group is a committee (Project Executive Group) that serves as a gate keeper on university level between the different stages of the project. The user group would now be consulted on design specific issues when their user expertise was needed. As exemplified by a statement of the end user champion, the end users' representative on the Project Executive Group.

'we had a committee that had representatives from each of the then seven departments but that met perhaps six weekly. but as and when necessary, more sometimes (…)'

As the facility project manager states, the motivation of end users can change over the course of a project as well, once the initial requirements have been fulfilled (the creation of additional space), motivation for participation seems to centre around aesthetics of the finished outcome:

'(…) you will find that a lot of end users are more interested in what kind of furniture you get in, once it is finished, what goes on the wall, (…)'
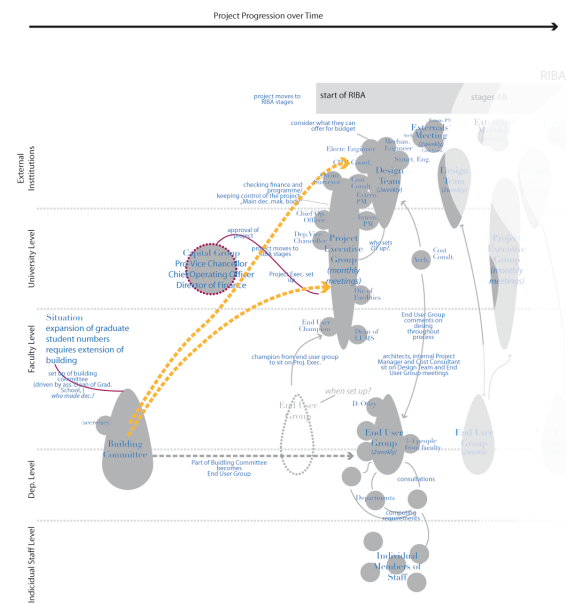

Figure 4: shows the move of decision making power from the project initiators on departmental and faculty level to a decision making group on university level (yellow arrow). It is based on interviews with five informants and minutes of meetings.

INTENTIONALITY IN CASE STUDIES

The other aspect of analytical consideration is the degree to which the involvement of participants was subject of a specific design intention. Here I, again, refer to the distinction between human-centred and purpose-driven as outlined by Krippendorff. It is harder to draw a clear line between them both in reality. Therefore I will give examples of human-centred design aspects as well as purpose-driven aspects in both case studies.

Human-centred aspects comprise the consideration of participants' confidence to play a specific sequence of tunes which got negotiated before every newly improvised piece during the performance, here the artists developed the music piece in dialogue with the participants.

Purpose-driven design choices included moving participants between different outdoor sites which were determined by the artists themselves without consideration of artists conditions when performing on a cold spring day for a few hours outdoors. The purpose-driven aspects reached a dominance over the human-centred approach when other professionals, such as photographers and video documenters hired by the festival organisers, joined the group. The purpose now became to group and arrange the participants in a way that would be appropriate and ideal under the premise of documenting the event in audio and video/photos. This represented the final outcome, the actual performance in this rather organic flow of a series of rehearsals.

Figure 2: video, audio and photo documentation caused a shift towards purpose-driven design intentions

With regards to intentional involvement and design of participation during the construction project, a similar development compared to the way motivation changed over time, can be observed. Initially the self-motivated group meetings represented self-intended and initiated participation.s As the project moved on, intention to participate became more structured, and moved from human-centred intention to purpose-driven neglect one might say. The faculty project manager comments on the overall development of participation of end users:

'It is really important in our job at the beginning of the stages to get the end user involved to make sure we are delivering to their requirements. And then once we get through tender stage (…) it just runs through the various stages and finishes at practical completion.'

While the end user champion provides insight into how purpose-driven participation was actually taking place:

'(…) but here are the plans that are proposed, now everyone has a chance to look at these. and if you don't have any problems by the end of next week this is what is going to happen guys.'

Further on in the process participation would fall apart, as the purpose moved from planning and design to completion

' (…) there has been quite a lot of consultation done with that end user group, but then when you get on to site it tends to drift off now this is the point were it falls away a little bit.'

CONCLUSIONS

With regards to the art performance, the motivation for designing the way in which participants would become involved would vary between intrinsic motivation and interest that participants had to extrinsic, representational interests that made the participants become the product of a purpose-driven process rather than involving them in actively shaping the social fabric of the organisation.

With regard to the construction project, motivation for participation developed from intrinsic, problem-oriented motivation, as represented by initial group of users, to engagement dominated by an imposed, externally applied structure and process. Here, participation becomes more difficult to maintain, as a quote from the end user champion suggests:

' (…) the people were more concerned to keep their departmental spoke in the wheel rather than being intensively involved in the compromises that you have to make.'

The intended design for involvement on the other hand is being deeply implemented in the early stages of the process, the project manager is aware of the importance of the involvement of end users. From the interviews it is not clear though, what influence these consultations had on the end result. Therefore, the human-centredness might be limited. Further, as the project moved on, involvement changed and got dominated by the purpose-driven process structure towards complete neglect.

DISCUSSION

Data analysis suggests a link between motivation for and intentionality of involvement. Conflicts and failure in and of participation might be understood as results of a neglected human-centred focus on the participating stakeholders which is argued is likely to result from a purpose-driven, extrinsic motivation to involve others. This failure can be witnessed on different participatory levels in project organisation which in one case led to limitations in stakeholders ability to participate on another level between organisers and performers in the music performance project, a mismatch between raised expectations on the participants side and the real conditions of performing might have led to a lack of involvement.

By referring to conceptualisations of motivation and intentionality within design theory, it is possible to identify aspects of Human-Centred Design in processes of organising. With respect to the first research question, intentions for people to get involved are more likely to be intrinsically motivated, while intentions to

involve others tend to have some sort of extrinsic motivation attached.

While Krippendorff's concepts helped me to understand better the role of motivation and intentionality for design, when applied to organisational context and participation, it seems that intrinsic or extrinsic motivation both prove powerful ways to involve people in shaping an SDA. Still, as analysis of the art project shows, when relying on intrinsic motivation only, establishing participation can be challenging. When an organisation is more dependent on intrinsic motivation, intentions for the design of involvement become on the one hand more critical but not necessarily more respected. Also, the complexity of a Socially Defined Artefact makes the coherent design of involvement (i.e. communications and interactions) more difficult. Intentionality in this context first of all is a matter of awareness. Awareness of the intrinsic motivations of those to be involved by those who intend to involve them.

With this paper I hope to raise awareness of the relevance of motivation and intentionality for the success of organising for involvement as well as involvement in organising. Motivation is not only a driver for design it is much more a design asset itself. The creation of a shared motivation, as these cases illustrate, can be assumed to be important for successful participation in the creation of organisations.

By defining organisation as socially defined artefact it becomes more difficult to determine the manifestations and indicators for design. As I attempt to show, such tacit concepts as motivation and intention become important for the success of collaboration and involvement and determinant for the shape of organisations.

Further, if the idea of organisation as artefact made by humans and with humans in it is followed through, it might be regarded as a self-designing, self-shaping artefact or system. Which makes the determination of design and allocation of its appearance and the principles that shape it even more complicated. Here the question of intentionality of involvement becomes harder to answer since actors might be less clearly identifiable. This idea is thought to be a potential area of further inquiry.

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