

Sub Theme 09: The Beautiful and the Ugly in Art, Design and Organisation

The co-design of organisational artefacts and their role in articulating the aesthetics of organisational culture

Emma Murphy¹, Donald MacLean², and Lorenz Herfurth³

¹ Emma Murphy

Institute of Design Innovation

School of Design

Glasgow School of Art

Glasgow, UK

G3 6RQ

e.murphy@gsa.ac.uk

² Donald MacLean

University of Glasgow

Adam Smith Business School

Glasgow, UK

G12 8QQ

³Lorenz Herfurth

ImaginationLancaster

Lancaster University

Lancaster, UK

LA1 4YW

Purpose of the paper

The purpose of this paper is to contribute to the field of organisational aesthetics from a design management perspective. To do this, this paper will provide rich insights into the role design plays in understanding, shaping, and reinforcing organisational culture, in a way that helps organisations build and sustain their innovative capacity.

By describing a range of case studies, which form part of a 3-year research project entitled “*Creating Cultures of Innovation*”, this paper will i) outline “formally designed” organisational artefacts, which could be viewed as an expression of the formal culture of an organisation; ii) describe how co-designed organisational artefacts developed during this innovation research project can be seen to uncover and shape a changing organisational culture that encourages an innovative mindset pertaining to the company’s organisational development; and iii) how recognizing this activity as design could help organisations capitalize on design’s role in innovation. For example, from this study, the formally-designed artefacts that currently exist in the organisation (e.g. organisational charts, business cards, job descriptions), and the co-designed artefacts which were formed as a result of collaborative design interventions (e.g. the Yarn Journey*, collage, learning spaces) give management and staff the ability to better understand current culture, develop strategies for innovation, and embed an innovative culture in their organisation, moving forward. In

addition, if designers and managers are able to better articulate design's value, this could help designers better bring this benefit to businesses, and help businesses "ripple out" this behavior so that it permeates the organisation and gains support.

Project background

The empirical fieldwork for this paper has been drawn from a 3-year research project. The project, entitled "Creating Cultures of Innovation," has been funded by the Scottish Funding Council and explores the role design can play in harnessing innovation in small businesses. Six SMEs were selected to take part in the research. These SMEs participated in a programme of work, which involved co-forming of, and participation in, a series of design interventions. These interventions were aimed at bringing design approaches to the companies, while exploring areas specific to the company's innovation strategy. Collectively, these areas of strategic innovation are helpful in eliciting the complex landscape of innovation in SMEs; e.g. that innovation means different things to different organisations. Areas identified include cultivating and growing the entrepreneurial environment within an organisation, the creation of a dynamic learning environment to enable knowledge transfer, aligning offers with ambitious sectors, and collaborative brand development to expand into new markets. These innovation priorities formed the basis for the design interventions; however, there was enough flexibility other areas to emerge.

The case studies in this research project were selected to provide rich, in-depth and qualitative insights into a range of innovation challenges identified by SMEs, and articulating design's role in building an organisation's innovative capacity relating to these challenges, rather than constituting a quantitative data set to make generalizations.

Each of the organisations underwent a collaborative programme of activities, structured around design interventions, with a lead designer (and associate designers) and a lead researcher. This provided a mix of practical design skills for conducting the design interventions with the participating organisations (provided by a designer/ designers working directly with the organisation), and more objective, reflective skills encouraged by the researcher, who would work alongside the organisation and the designer to interrogate the process, reflect on the impact each

intervention was having on the team, and to ensure a degree of reflection as the project progressed. An external evaluation researcher was also part of the projects, to capture outcomes against objectives, and also, to uncover unanticipated outcomes. A more detailed breakdown of the research approach can be found in the Approach section.

Theoretical background

Organisational aesthetics, as a field of enquiry, can provide an alternative frame of reference for understanding the culture of organisations (e.g. Burrell and Morgan (1979); Morgan (1989); Strati, (1992). Previous discourse in organisational analysis has included metrics such as efficiency and effectiveness, which could favor short-term thinking, and a fixed point in time at which an organisation achieves a level of success (Taylor, 2013:79, cited in Taylor, Koivunen, and Wennes 2015), rather than considering the whole organisation and a long-term view. Aesthetic qualities of organisations can be viewed as assets in themselves; (e.g. Hanfling (1992), cited in Taylor, Koivunen, and Wennes 2015); Jonas (2008).

Organisational aesthetics could offer a way of understanding the dynamic, living, always changing, complex nature of organisations. It has been noted however, that measurement and metrics are often difficult to define in this kind of research (e.g. Hassard (1991); Throsby (2001); Klamer (2004). Design however, is an interdisciplinary that values and questions the aesthetic in itself; therefore looking at organisations from a design perspective could provide insights into alternative forms of value in organisations and the people within them (see for example Ebers (1985); Ottensmeyer (1996); Ramirez, 1996), cited in Taylor, 2002: 822).

Aesthetics and form of organisations could be recognized in organisational artefacts, for example, the office (Strati, 1992), chairs (Strati, 1996, or conference rooms (Witkin, 1990). These however, constitute physical objects which are to an extent, fixed and interacted with, rather than crafted or shaped by the organisation. An employee or visitor may choose to use one such item, but doesn't necessarily have the option to change the form of these objects or influence their construction. Murphy (2011) contends that interior design and brand manifestation helps us understand

certain elements of an organisation through its furniture, and people and the socio-materiality of organisations is becoming a richer field of discourse.

Considering this, this paper will offer a design management perspective, outlining how co-designed artefacts provide a contrast to formal or imposed organisational artefacts, and how recognizing this activity as design could allow it to achieve agency within organisations to foster a dynamic and innovative culture. It should be noted that the authors of this paper align the notion of a “co-designed” organisational artefact to a definition of co-design offered by Sanders and Stappers (2008:6) of “creativity of designers and people not trained in design working together in the design development process”.

The research gap that’s addressed

There is a wealth of literature on organisational aesthetics (see for example Hancock (2005); Linstead and Höpfl (2000)), which this paper seeks to enrich by adding a design perspective. It will do this by providing examples of existing organisational artefacts, and how these can uncover elements of “formal” and imposed culture (we call these formally designed organisational artefacts) – but also how the co-design of new organisational artefacts (exemplified by this project) can indicate and help to shape a dynamic culture geared towards enriching the companies’ capacity for innovation. A recent study in this area is provided by Vålånd and George (2014), which although useful, focuses primarily on artefacts (such as drawings, board games) that help to bring employees together, rather than artefacts which are co-designed and therefore could be viewed to embody cultural values. As well as enriching this area of research, this paper seeks to contribute to the literature on design innovation; in this case, design innovation refers to both the innovation of design itself, and organisational innovation by design. The contribution to design innovation studies is made by defining the characteristics and value of a designerly approach to organisational innovation, and the skills needed by designers and non-designers (*e.g. what does this mean for design?*). In addition, it is hoped that by uncovering the designed artefacts of an organisation in this project, managers could start to consider the formal and informal culture of their organisation, and how they could use design to help them build their innovative capacity.

The impact agenda frequently calls for more collaborative research activity between academia and industry. This kind of collaboration should be treated as research, and not consultancy. In addition, design is increasingly being understood as having a real benefit to business, e.g. Martin (2009); Brown, (2008). Where organisations may previously have employed a management consultant to diagnose a problem, and implement steps on how to solve it (and then walk away), they could now look to designers to help engender a more collaborative approach to defining and solving the complex problem spaces of organisational innovation.

The UK design industry is becoming better at communicating the idea that design has a value in business (see, for example Associate Parliamentary Design and Innovation Group (2010), Cox, (2005); Design Commission (2013), Design Council And DBA (2005); Design Council (2008a; 2008b; 2010); Design Council And Creative And Cultural Skills (2007). That said, while design undergoes a perpetual struggle to define itself (Press and Cooper (2003), and by recognizing that innovation means different things to different organisations, it is furthermore complex to understand articulate how organisations have used design to help them become more innovative. It is hoped that this paper will address these gaps.

In light of this, this paper makes 3 key contributions: 1) articulating the characteristics of a design approach to aiding organisational innovation, 2) defining the design (and designerly) attitudes that are conducive to this kind of interaction and 3) giving insights into the formally designed and co-designed organisational artefacts in these cases, which could assist managers in understanding existing cultures – and developing more innovative cultures in their organisation. Most crucially, it is hoped that this paper will give managers a richer understanding of the role of design in organisational innovation in SMEs, and give designers a better insight into how to better communicate a bespoke process. Finally, we would like to conclude the paper by outlining the skills and attitudes that should be engendered in design education to enable designers and organisations to work in this way.

The approach taken

Co-designing bespoke innovation spaces

Prior to the launch of the workshops, a series of meetings were held wherein potential themes for the design intervention were explored. After a variety of options were put forward for consideration, an innovation goal was set – which would form the basis of the design interventions. For example, within one case study this was: *“to use design to identify innovative activities which will enable us to improve health in Scotland”*. Another was: *“to use design as a catalyst to cultivate and grow the entrepreneurial environment within which business ambitions are supported to accelerate tourism sector growth and increase destination competitiveness”*.

Taking a horizontal slice of participants

In each of the workshops, participants were recruited using a “horizontal slice”; e.g. people from different levels and experiences across the organisation. Although this enabled a range of perspectives, on reflection, the design interventions may have benefited from more authoritative leaders of the organisations, to ensure that design activity “rippled out” beyond the interventions. As it stood, the design interventions themselves encouraged active participation among those who were there, but when it came to bringing the ideas out within the “safe space” of the design interventions, this was less easy. More on this can be found in the “Reflections” section.

The use of design approaches (integrated with familiar non-design approaches)

There were various design techniques used to hone down the focus of the interventions, and to facilitate later interventions. These include brainstorming ‘user groups’, simple provocations, ideation techniques such as opportunity spotting, scenario building and mind mapping. There was also an emphasis on prototyping, making and visualizing. These design approaches were used amongst non-design research approaches more aligned to the social sciences such as interviews, and observation. It was felt that using a mix of methods would allow participants to recognize the place of design approaches and how they could enrich and add contrast to the non-design approaches they were familiar with in problem solving. These design approaches facilitated the co-design of the innovation space that the organisations wanted to explore during further interventions. This co-design mindset permeated the next phase of the projects, whereby the artefacts themselves were co-designed between the design research team and the company.

Sharing knowledge about design innovation

Throughout the programme, the designers conducted sessions outlining underlying innovation design principles that might then be applied elsewhere. Thereafter a series of monthly, and later bi-monthly, workshops were held, with each seeking to gather together participants from the various disparate institutions in order to work to design innovative solutions to the issues and problems they were beginning to identify through analysis of qualitative data that had been collected in the field.

Method of analysis

Research methods included workshops, observation, interviews, brainstorming, and prototyping. The data sources for this research included a reflective journal, sketches, fieldnotes, observation notes, interview transcripts, models and visual maps. In terms of understanding the core findings of the research, this was largely led by analyzing the interview transcripts and fieldnotes, and coding appropriately. These categories were then used to analyze the other ad-hoc sources of data e.g. maps, emails, etc. The interviews, and workshop proceedings were recorded digitally, and then transcribed. The data was analyzed using the process of coding, as defined in Strauss and Corbin's grounded theory approach. This approach requires the researcher to be sensitive to the data, and able to notice emergent themes and categories during analysis (Denzin & Lincoln 2000, Strauss & Corbin, 1990). This method was adapted as follows:

- *Stage 1: Audit of Existing Knowledge of Organisational Artefacts and Design Approaches to Innovation*

This stage was fundamental in the recognition of the approach to these interventions, key gaps in which to place this research, and development of the new guidelines identified in the research, as it helps to capture how the previous knowledge had shaped the new knowledge.

- *Stage 2: Identification of Broad Categories of Design Activities, Approaches and Designed Artefacts from Interviews and Workshops*

Beginning with a focus on the interviews, the interview transcripts were analyzed, while seeking patterns and variance in descriptions of design activities, approaches and designed artefacts. Categories of techniques and important factors were drawn

out from all interviews, and then probed through further examination of the transcripts.

- *Stage 3: Revising and Building Upon These Initial Categories Using Cross-Cases From Observation, to Frame into Single Factors*

These initial categories were then examined by analyzing the observation data, to validate the categories formulated. In addition, further categories which emerged were then cross-examined with the interview and workshop data and resulted in synthesis into single, specific factors. The initial categories were “formally designed” and “co-designed” organisational artefacts. Attempts were made to further synthesise these into further sub themes, however, this approach was rejected, as further categories could not be consolidated satisfactorily. The two categories that have been proposed allow this paper to provide a meaningful design management perspective to organizational aesthetics.

- *Stage 4: Validating These Single Factors Using Qualifiers From All Fieldwork And Further Observation, and Formulating the Actual Findings From These Factors*

The factors developed in the previous stage were then cross-examined using qualifiers from all data collected. The explicit identification of factors was followed by further qualification and verification of these issues through seeking further examples of these from the data. Due to her experience with the case study companies and their employees, one of the authors was extremely close to the data, and had developed a sensitivity to cultural nuances, or any impeding factors on the data, such as “buzz-words”. Glaser (1978) refers to this skill as “theoretical sensitivity”.

Main findings

Finding 1: The characteristics of a design approach to organisational innovation

There is a huge complexity associated with communicating the design process for something as intangible, unknown, dynamic and complex as organisational innovation. Organisational innovation means many different things to different organisations – and it changes. Equally, there is no one set of design skills that designers use to work with organisations. Therefore there is no one size fits all

approach. But what *can* we say about the design approach to organisational innovation? And how does this stand out as unique to other approaches (e.g. that of a management consultant. Based on this project, the authors contend that there are 3 core characteristics of design approaches to organisational innovation. These are i) taking the time to understand the context for organisational innovation ii) collaboration with the organisation and iii) the creation of physical artefacts. These will now be explained in more detail.

Understanding these design approaches is useful, however, in this collaborative context, it's not just designers who are responsible for organisational innovation; it's the organisational participants too. It would be unrealistic to expect participants to simply "learn how to be a designer" and for design skills to transfer over to these participants. However, there are what we term "designerly qualities" that we have observed in our participants during the course of the programme. These are: i) a willingness to embrace the visual and the physical. ii) the ability to tolerate ambiguity. Chantal Mouffet likens this to an ability to "hold" chaos. Not to engineer it, or to necessarily try to "deal" with it, but more to just work alongside it.

Bearing in mind these design qualities, and designerly qualities, what skills and attitudes should we be encouraging in design education? The co-author's institution is actively considering how these skills can be engendered in students studying design as a major (e.g. MDes design innovation students) and also as a minor – e.g. business school students a management degree with a minor in design innovation.

Finding 2: There are two types of organisational artefact: i) Authoritatively designed artefacts of static and formal organisational culture and ii) co-designed artefacts of indigenous and dynamic organisational culture

These can be summarized as follows:

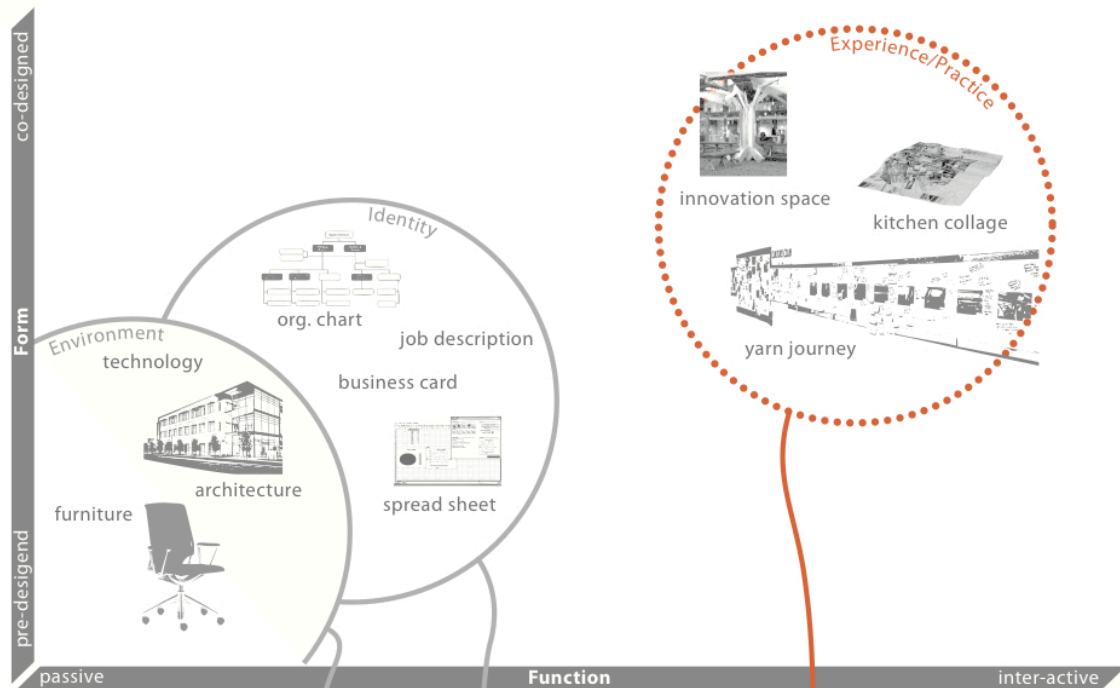
- Formal, imposed design organisational artefacts include an organisational chart, business card, job description and the spreadsheet.
- Informal, co designed organisational artefacts include "the Yarn Journey", the 'kitchen collage and bricolage as an alternative to a spreadsheet (explained

later in this section)” and the design of a physical “innovation space” (also explained later in this section).

It was only through recognition of the co-designed organisational artefacts that we realized that imposed design artefacts of monolithic and formal organisational culture exist too. For example, the co-designed organisational artefacts in the textile company that we worked with include the “Yarn Journey”. This was as a collectively-designed artefact that encouraged collaborative problem solving, transparency and collective working. It took the form of a physical map which communicates the journey that yarn took throughout the business, and the key processes and interactions involved. One could argue that this co-designed artefact was a far more realistic insight into who talks to whom, and the core activity of the organisation, than for example, an organisational chart, or an operational flow chart. By having the Yarn Journey as a physical artefact on the wall, this was something that the workers felt able to populate and talk about, rather than being something imposed on them. This contrasts with the more formally-designed artefacts of organisations e.g. business cards denoting a job title, or organisational charts denoting who should talk to whom, and job descriptions denoting what employees should do. The Yarn Journey is a more accurate reflection of what actually happens. This collaboratively created artifact is powerful through its physical and social qualities. It resides on the artefactual level of Schein’s concept of organisational culture (Schein, 2004), but permeates into the deeper levels: underlying behaviours and assumptions (Schein, 2004: 26). This artefact continues to add value to the organisational culture beyond its realisation through an action-provoking character: it can be understood as “resulting from physical behaviour, but also as initiating new actions” (Pratt and Rafaeli, 2006: 280). The “Yarn Journey” as a physical artefact is not a finished, static product but an ongoing project that encourages interaction. It is used by stakeholders as a flexible, permeable representation of what the organisation means to them. Rather than embodying another rather monolithic and imposed vision of what the organisation is expected to look like, expressed in organisational charts i.e., this is a representation of practiced and experienced values, assumptions and behaviours.

The following matrix puts the process of designing physical cultural artefacts into relation to their function inside the organisation. This research suggests that pre-

designed, (formal) or imposed artefacts remain distant and passive to most members of the organisation, thereby being of limited benefit to organisational innovation efforts. Co-designed artefacts maintain their engaging character and can play an active role in facilitating discourse and reflection around work practices, interactions and processes and in turn can inform organisational culture and innovation.



	Environment	Identity	Experience/Practice
Artefacts	<ul style="list-style-type: none"> Furniture Architecture Technology 	<ul style="list-style-type: none"> Charts Spreadsheets Business cards Job descriptions 	<ul style="list-style-type: none"> Yarn Journey - time line Kitchen Collage Innovation Space
Characteristics of Creation	<ul style="list-style-type: none"> Pre-designed by design experts Externally designed and created 	<ul style="list-style-type: none"> Internally envisioned Realised by design or organization experts Exclusive process 	<ul style="list-style-type: none"> Co-designed by stakeholders Internally envisioned Inclusive process Experience -driven
Characteristics of Use	<ul style="list-style-type: none"> Imposed/prescribed Limited adaptability Passive 	<ul style="list-style-type: none"> Prescribed Formal Closed to stakeholder input 	<ul style="list-style-type: none"> Continous adaptation during use Open and flexible to stakeholder input Dynamic
Relation to Organisational Culture	<ul style="list-style-type: none"> Surface level Representational 	<ul style="list-style-type: none"> Conceptual Static representation of values and assumptions Finished product/artefact 	<ul style="list-style-type: none"> Reflection of values and assumptions as practiced and experienced Informing values and assumptions

Figure 1. Form and Function of Selected Cultural Artefacts

Relating this back to innovation, the reason for the co design of this artefact was that the way yarn was processed was viewed as not being efficient – and being invisible to some (this concerned management greatly, as this is what the company does!) and therefore it was used as a way of identifying potential for process innovation.. In fact it made invisible connections, hidden assumptions and tacit behaviours visible, discussable and useful to the organisation.

In another organisation working under the programme, it was more about using design approaches to give agency to the indigenous and creative culture of Highland micro businesses, and to help them use design to aid decision making – e.g. using collages and bricolage to communicate ideas (e.g. to explore funding and development for a refurbishment of premises) as well as hard and fast spreadsheets (the formal design artefact). One organisation actually worked with the designers to co design a physical innovation space, which contrasted the conventional office space they had been formally allocated. The formally designed artefacts are useful in understanding a company's existing culture, whereas co-designing an organisational artefact could bring about change to the culture towards innovation.

In another organisation, the design approaches were used to help companies collaborate to join up their offer, and innovate in a way that enabled them to serve new markets and bring together a more consolidated offer. Design gave visibility to their business offer, and helped give form to what was an intangible proposition.

Finding 3: Recognizing this as design activity can help give managers an alternative to management consultancy – and helps to legitimize design as crucial to innovation – rather than an unclear “sporadic” activity

It is questionable as to whether a designer would be the first port of call when it comes to organisational innovation. Indeed, one may argue that in some cases, management consultants and leadership experts are able to quickly and effectively diagnose a problem, take employees through a tried-and-tested process, and to exit. This is echoed in a post-project reflective interview, where one interviewee stated: *“a management consultant’s remit in this space is to add value, and to do so as quickly as possible”*. One might ask, what did the companies in this project gain from working with designers? How does this approach differ? The authors of this paper would like

to make a call for more empirical research which compares and contrasts management approaches with design approaches to organisational innovation. What we can report from this project is that co-designed artefacts developed during the design approach can help to create a more powerful experience for participants. By being part of the design process, and through prototyping, participation and taking ownership of the artefacts beyond the design interventions, we propose that design creates a more powerful and long-term experience for participants. Furthermore, the design approach is crafted collaboratively to the cohort. As one designer put it, “we may have an idea of the approaches we will use, but it’s the spaces in between that we don’t know, that form the biggest part of the journey”. As Murphy and Press (2007) offer, this collaboration should allow for a trade off which encompasses the participants’ experience of the organisation, and the designers expertise in design.

Designers take time to understand the unique nature of problems (Piotrowski, 2011), and therefore managers must recognize that what may seem like time wasting in the early phases of a project is fundamental to everything that follows. However, designers must become better at articulating the principles of their approach – allowing for emergent principles – but which would help to communicate the fundamental principles to senior management. Our designers attempted to extend the Design Council’s Double Diamond. Furthermore, designers can still find it a challenge to be accepted at the boardroom table, especially when their role is seen as decorative or tactical, rather as fundamental or strategic (Brown, 2009; Best, 2009). In light of this, design’s role in organisational innovation is not always easy to clearly articulate at the outset. One might question whether it ever could be; as in this case, it was something that developed over time, and it was a co-designed experience; the co-creation of interventions helps to create a powerful, aesthetic experience, with impact.

Implications for design skills and designerly skills

The co-author of this paper has considered this question in relation to postgraduate teaching at their institution, and is researching the implications of design skills and designerly qualities in relation to both design students, and those studying design as part of a business degree. In these more collaborative, co-design partnerships the authors have seen from their fieldwork, in some cases, non-designers developing

designerly skills – e.g. appreciating the visual, taking the time to understand context, and framing the problem before responding. This points to a skillset in design students, in terms of the skills they bring to the table in their collaborations, and a skillset for business students who are learning about design as part of their degree. Enriching the skills of both student profiles could have great benefit for future collaborations when they move to practice.

At the 2014 Design Management Institute Academic conference, Bason (2014) offered insights into design attitudes, citing extensive research by Michlewski (2015) as a frame for articulating emerging design agendas. These can be summarised as follows (Adapted from Bason, 2014, cited in Bohemia et al (2014: 2321):

- Embracing uncertainty and ambiguity;
- Using the power of five senses;
- Engaging deep empathy;
- Playfully bringing ideas to life;
- Creating new meaning from complexity.

Richard Buchanan (2014), at the same conference, also referred to this forthcoming book by Michlewski (2015), but summarising these five design attitudes as follows:

- a passion for seeing ideas brought into concrete form;
- delight in engaging all the senses when exploring a problem;
- risk taking;
- an ability to see the whole situation;
- empathy for the organisation as well as the user.

These five principles, as synthesised by Buchanan (2014) are useful as a summary of the kinds of ‘design attitudes’ that designers should develop and hone if they are going to work in the field of organisational innovation. While Michlewski’s work focussed on attitudes of designers, it is clear that as organisations become more design savvy, and the role of the designer is democratised, non-designers are also adopting design attitudes. To the above list, the authors would add ‘*taking the time to understand the context before reacting*’. Typically, management consultants are

employed to add value and to diagnose a problem as quickly as possible. A design consultant however, will see time in the opposite way – e.g. the more time spent on understanding the problem, the better – and so it's depth of understanding that counts above a quick diagnosis.

Concluding remarks

This research has attempted to outline a project where design has been used to contribute collaboratively to organisational innovation. By highlighting the kinds of organisational artefacts that exists (existing artefacts to understand current culture and co-designed artefacts to help instil change), it is hoped that this will give organisations another lens through which to understand and shape the cultures of their organisations, and structure this in a way that contribute positively towards innovation. However, this paper acknowledges that there is a challenge, in that if designers are to play a role in organisational innovation, they must find a way of articulating this bespoke, yet unknown, co-crafted process. The Design Council's Double diamond is one example, but we should be offering alternatives which reflect the diversity of approach. We don't want prescriptive outcomes from students who follow this process – more a way of articulating the common principles of the process. Further the authors suggest to not exclusively focus on the representative role haptic/visual artefacts play for organizational culture – this is a well-explored area. They hope to have shown that considering the way cultural artefacts are created and used can contribute to a more refined understanding of a design contribution to organisational innovation.

References

- Associate Parliamentary Design and Innovation Group (2010). Design and the Public Good: Creativity vs. the Procurement Process. London: APDIG.
- Bason, C. (2014). Redesigning Assumptions: Challenging public problem spaces. In Bohemia, E., Rieple, A., Liedtka, J., and Cooper, R., (eds.) Proceedings of the 19th

DMI: Academic Design Management Conference, London, UK, 2-4 September 2014, pp2314-2330.

Best, K., (2009) *The Fundamentals of Design Management*. Switzerland: AVA Publishing.

Brown, T. (2008). *Design Thinking*. Harvard Business Review. Vol 86, No 6. pp84 – 96.

Buchanan, R. (2014) *Leading Design: Managing the Challenge of Innovation*. Unpublished Keynote presentation at 19th DMI: Academic Design Management Conference, London, UK, 2-4 September 2014.

Burrell G. and Morgan, G. (1979). *Sociological paradigms and organisational analysis*. London: Heineman.

Cox, G.(2005). *Cox Review of Creativity in Business: Building on the UK's Strengths*. London: Crown Copyright.

Denzin, N.K., and Lincoln, Y.S., (2000) *The SAGE Handbook Of Qualitative Research*. Thousand Oaks, CA: SAGE Publications Inc.

Design Council (2008a). *Design Returns: A Review of National Design Strategy 2004-08*. London: Design Council.

Design Council (2008b). *The Good Design Plan: National Design Strategy and Design Council Delivery Plan 2008-11*. London: Design Council.

Design Council (2010). *Design Industry Insights: Comments and Conversations on the Business of Design in the UK*. London: Design Council.

Design Council And Creative And Cultural Skills (2007). *High-level Skills for Higher Value*. London: Design Council.

Design Council and DBA (2005). *The Business of Design: Design Industry Research 2005*. The Design Council/ The DBA.

Glaser, B., (1978). *Theoretical Sensitivity: Advances in the Methodology of Grounded Theory*. San Francisco: The Sociology Press.

Hancock, P. (2005) *Uncovering the Semiotic in Organisational Aesthetics*. *Organisation*. Vol 12, No 1. pp 29 - 50

Hassard, J., (1991) *Multiple Paradigms and Organisational Analysis: A Case Study*. *Organisation Studies*. Vol 12, No 2., pp 275 – 299.

Jonas, W., (2008). *Design Research and its Meaning to the Methodological Development of the Discipline*. In Ralf, M. (Ed.) (2008). *Design Research Now*. Basel: Birkhauser

- Klamer, A. (2011) [online]. Cultural Goods are Good for More Than Their Economic Value. [Online]. Available at: <http://www.klamer.nl/index.php/publications/74-scientific-non-scientific-publications/207-cultural-goods-are-good-for-more-than-their-cultural-value-may-2001-later-revised-updated-january-2011>. [Accessed 08 December 14].
- Linstead, S. and Höpfl, H. (Eds) (2000). The Aesthetics of Organisations. London: Sage.
- Martin, R. (2009). Design of Business: Why Design Thinking is the Next Competitive Advantage. Boston, MA: Harvard Business Press.
- Michlewski, K. (2015, Forthcoming) Design Attitude. Farnham: Gower. Cited in Bason, C. (2014). Redesigning Assumptions: Challenging public problem spaces. In Bohemia, E., Rieple, A., Liedtka, J., and Cooper, R., (eds.) Proceedings of the 19th DMI: Academic Design Management Conference, London, UK, 2-4 September 2014, pp2314-2330.
- Morgan, G. (1989). Creative Organisation Theory: A Resourcebook, Newbury Park, CA: Sage Publications.
- Murphy, E., (2011). Learning to Practice: A Case Study in Dynamic Learning at the Interface of Design and Business. PhD Thesis, University of Dundee.
- Murphy, E., and Press, M., (2007). Strictly ballroom or dancing in the moment? Methods for enhancing the partnership of design and business. *Seventh European Academy of Design Conference: Dancing with Disorder: Design, Discourse, Disaster*. Izmir, Turkey.
- Pratt, M.G. & Rafaeli, A. (2006) Artifacts and organizations: understanding our “object-ive” reality. In: Artifacts and Organizations: Beyond Mere Symbolism. New Jersey, Lawrence Erlbaum Associates, pp.279–288
- Press, M., and Cooper, R., (2003) The Design Experience: The Role of Design and Designers in the Twenty-first century, Hants: Ashgate Publishing Limited.
- Sanders, E. B. N., and Stappers, P.J., (2008) Co-creation and the new landscapes of design. *CoDesign*, Vol 4, No 1, pp 5-18.
- Schein, E.H. (2004) Organizational Culture and Leadership. 3rd ed. John Wiley and Sons.
- Stang Våland, M. and George, S. (2014). The Socio-Materiality of Designing Organisational Change. *Journal of Organisational Change Management*, Vol 27, Iss 3, pp 391 – 406.

- Strati, A. (1992). Aesthetic understanding of organisational life. *Academy of Management Review*, 17 (3) 568–81.
- Strati, A. (1996). Organisations Viewed Through the Lens of Aesthetics. *Organisation*. Vol 3, Iss 2. pp, 209 - 218.
- Strauss, A., and Corbin, J. (1990) *Basics Of Qualitative Research: Techniques And Procedures For Developing Grounded Theory*. Thousand Oaks, CA, SAGE Publications Inc.
- Taylor, S. S. (2002). Overcoming Aesthetic Muteness: Researching Organisational Members' Aesthetic Experience. *Human Relations* Vol. 55, No 7, pp821-840.
- Taylor, S., Koivunen N., and Wennes, G. (2015) Call for subtheme 09: The Beautiful and the Ugly in Art, Design and Organisation 31st EGOS colloquium, www.egosnet.org.
- Throsby, D. (2001). *Economics and Culture*. Cambridge: Cambridge University Press.
- Witkin, R. (1990) 'The Aesthetic Imperative of Rational-Technical Machinery: A Study in Organisational Control through the Design of Artefacts', in P. Gagliardi (ed.) *Symbols and Artefacts: Views of the Corporate Landscape*, pp. 325-338. Berlin: de Gruyter.

* Insights and findings on the 'Yarn Journey' as an informal organisational artefact