INTERNATIONAL CONFERENCE ON ENGINEERING AND PRODUCT DESIGN EDUCATION
5 & 6 SEPTEMBER 2013, DUBLIN INSTITUTE OF TECHNOLOGY, DUBLIN, IRELAND

ARE WE ALL DESIGNERS?

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ABSTRACT
Several design writers have proposed, or at least implied, that "*...we are all designers...*" through the way we manipulate the environment around us, select the items we wish to own, plan, build, buy, arrange, and restructure things all in a form of design [1, 2]. During the same time, design as a behavioural phenomenon has increased its capacity and breadth and as a result, design activity extends from the objects we use on a daily basis to cities, landscapes, nations, cultures, bodies, genes, political systems, digital existences, food production, the way we travel and even cloning sheep [3].

This paper reports on an Arts and Humanities Research Council (AHRC) funded project that seeks to explore current models of creative practice, examining where disciplinary, conceptual, theoretical, and methodological edges lie in an attempt to define the significant drivers of any movements across disciplinary boundaries. The project's creative workshop activities have also facilitated comparison of the outputs between single-disciplinary and multi-disciplinary group working and has allowed the research team to explore how non-designers and designers alike transfigure creative space during practical design exercises.

The outputs of the first workshop pose fundamental questions for the future of design education models based purely on disciplinary perspectives and furthermore questions whether current understandings of design thinking encompass more generalist human traits. The need to educate designers who can surf across disciplinary boundaries to tackle the 21st century's emerging complex and wicked social [4], environmental and economic issues suggests a radical rethink against the individual and disciplinary based perspectives that largely prevail.

Keywords: Design thinking, Disciplinarity, Boundaries, Creative Workshops.

1 INTRODUCTION

With accelerated design activity advancing well into the 21st century, it has been clear for some time now that an increasing number of practitioners across a diverse range of disciplines regard their methods as rooted in some form of design practice or are using methods that could be considered "designerly" [5]. It is equally clear that design is expanding its disciplinary, conceptual, theoretical, and methodological frameworks to encompass ever-wider disciplines, activities and practice. The recent Design Council Report on the UK's Design Industry Insights, for example, reinforces this trend by highlighting the fact that over 55% of design businesses in the UK collaborate with other disciplines and 51% say they work regularly with non-design businesses [6]. It is also important to note that nearly half of the designers practicing in the UK today do not have a formal qualification in design. With these startling figures in mind, this paper reports on the first of a pair of experimental design research workshops aimed at opening up disciplinary practices with a range of new explorative design methods.

The understanding of these new emerging practices could be described within classic design models or some new, or even fundamental form of human activities ranging from problem solving to innovation or experimentation. The answers are likely to be complex, take some time to emerge, and result from a large number of research explorations across multiple disciplines. The aim of this paper is not to tackle this complexity head on but to recount how we can at least ask some better questions.

The research team are drawn from Northumbria University, the Royal College of Art, Edinburgh Napier University and Imperial College London, with disciplinary expertise ranging across Product Design, Innovation Design Engineering, Animation, and Engineering. The paper will illustrate how the workshop participants from diverse academic, industrial and institutional backgrounds involved in

this project have, thus far, collaborated in groups and as individuals to create a series of unique maps of contemporary design practice. The research network members were drawn from across the three main cultures of thinking; science, arts and humanities and design [7] with experience ranging from students and doctoral candidates to acknowledged global leaders in their fields.

2 AIMS AND METHODS

The key aim of this project is to explore emerging forms of design practice that routinely traverse, transcend and transfigure conventional disciplinary, conceptual, theoretical, methodological, and cultural boundaries. This project explores these fertile new terrains of creative practice, including the study of creative and innovative approaches of production and entrepreneurship. The project involves a number of participants that are themselves routinely traversing, transcending and transfiguring well-established and conventional disciplinary boundaries in their work. The participants involved in this project hail from a number of disciplines including psychology, engineering design social psychology, music production, anthropology, fine art, biomimetics, health economics, architecture, nursing, and education. Currently, the network of participants stands at over 40 individuals.

The project's first workshop involved a number of creative activities, which aimed to examine the disciplinary perspectives of each participant that would, in turn, allow comparisons to be drawn between them. The selection of creative activities was carried out after a review of workshop techniques from the experiences of network members and action research techniques. The first exercise involved each participant wearing an identical T-shirt with a series of conceptual linear spectrums printed on it such as "Scientist……Artist", "Build……Break", and "Proof……Hunch" (Figure 1 - left). Each participant was asked to pin a badge labelled "I am here…" (Figure 1 - right) where they felt they belonged on every spectrum.

Figure 1. T-Shirt Exercise Tools (T-Shirt and Coloured Badges)

Ultimately, each participant created their own unique T-shirt with a series of badges adorning it (Figure 2). This exercise allowed the participants to relax and set the scene for a full day of creative exercises. The T-shirt exercise, although a quick and fun task, revealed an insight into each participant's personal approach to their creative practice and gave the research team an indication of some significant trends amongst the group. It also gave us an insight into how they see themselves and how they described their thinking strategies, methods and skills. It allowed us to tentatively plot collectively the terrain of creative disciplinary space highlighting boundaries, intersections, and edges between the participants.

Figure 2. T-Shirt Exercise (participants' completed versions)

The next exercise, "The Future Interdisciplinary Character", challenged the participants to think about the future, complex, inter-connected world we are set to inhabit and to think about what skills, knowledge and experiences will be needed to best address these issues. Here, each participant was given a "blank character" (Figure 3 - left) and asked to complete it so that it fully described the "The Future Interdisciplinary Character" who might be best positioned to address the world's future challenges.

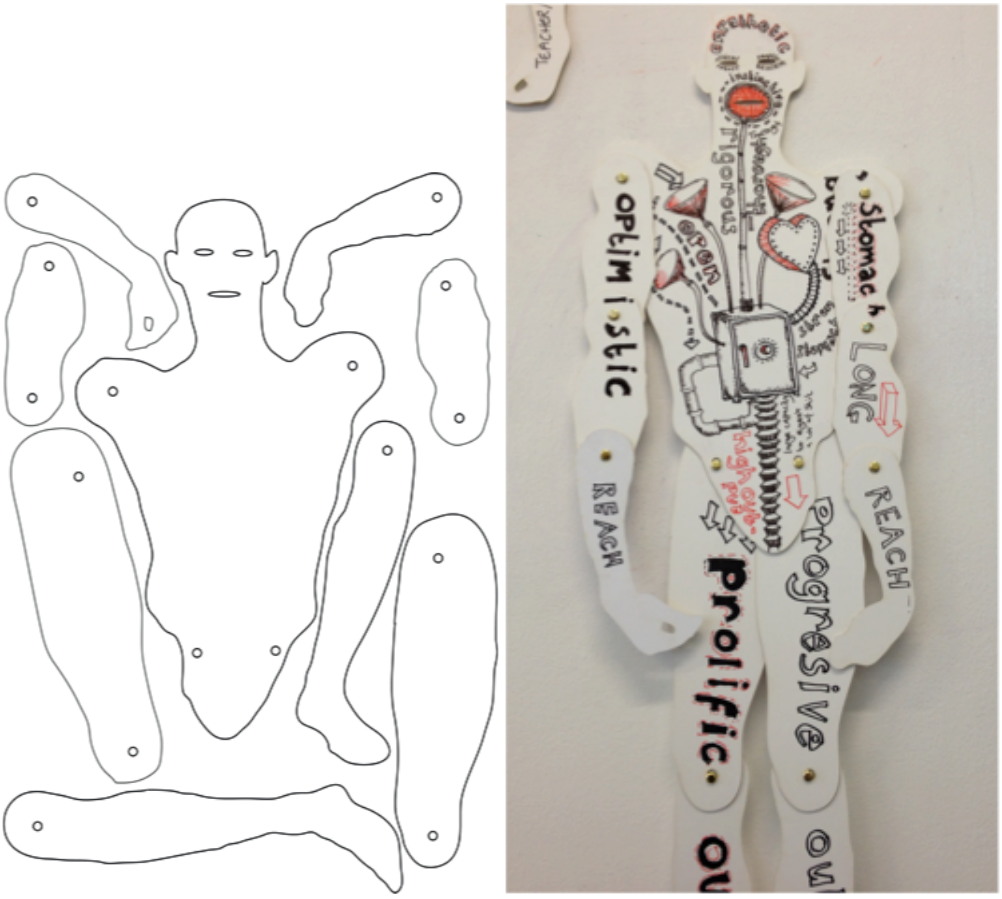

Figure 3. The "Future Interdisciplinary Character"

3 OUTPUTS

During the T-Shirt self analysis activity several participants expressed the view that their placement on the spectrum was highly contextual and that their answers as a whole were from a range of experiences that were not drawn from a single consistent reference point. Even though this was an introductory "ice breaker exercise" it would seem to indicate that not only are disciplinary boundaries being crossed, but that the context and creative response varies across individuals.

Initially the main surprise, in the future interdisciplinary character activity, was the speed and enthusiasm that the participants took to radically re-engineering the physiology of their characters adopting a wide range of responses from mythical multi-limbed functions to chameleon characteristics. A number of strong themes emerged from this activity. Participant J, for example, stated that the future interdisciplinary character would need to have a "*strong heart and a "strong stomach*" as they will need to put up with "*a lot of heartache and be able to digest a lot*". They will need to "*absorb a lot of experiences and emotions and be empathetic, critical, robust and resilient*" (Figure 3 - right). They will need to be "*a good communicator, a good team player, but equally be able to be told what to do*". However, participant J raised the question that "*the reality of interdisciplinary may not be practical*". Participant J finally suggested that "*direction and guidance is important*".

Participant M stated a balanced two heads of theory and funding driven skills would be desirable. This participant emphasised the importance of "*balance*" as an attribute across several spectrums including "*theorist – empiricist*", "*teacher and leader as well as a collaborator*", "*quantitative – qualitative*", whilst being "*flexible and robust*". Participant H approached the exercise with words, highlighting challenges for the future. Participant H stated "*knowledge would be very important*" and that the future interdisciplinary character would require a "*wide vision and communication*". Furthermore, the future interdisciplinary character would need to be "*adventurous, flexible, possess a thick skin for protection, be relaxed, be able to laugh and be sociable, have drive, and be well connected*". Participant C based her portrayal of the future interdisciplinary character in terms of the ideas and values she has for her children. Thus, participant C stressed that this person should have "*political and other values that are based on being fair and decent*". Moreover, the future interdisciplinary character should be "*committed, perceptive, thoughtful, big-hearted, warm, loving and affectionate*". Also "*energetic and athletic, and possess abstract thinking but be able to apply it to a future generation*".

Figure 4. Wordle Word Cloud of the Future Interdisciplinary Character

Participant G stated that the future interdisciplinary character would be an "*average person just like us*". But a person who is "*given resources, time and has a wide network, a person with a genuine and vivid ambition. Ambitions that are personally driven, not bad ones*". Participant L based the future interdisciplinary character on what she believed to be her future self. Participant L stated that s/he would need to wear "*different hats, possess or have access to lots of information across different*

disciplines. Communication skills would be paramount and they would need to be focussed and make decisions in the future chaotic world. They would need to stay fit to balance work and pace themselves better to deal with more change. Be agile and flexible and be willing to move on". Participant A predicted a new evolution of generation claiming we are at the edge of an abyss. He suggested that "*there will be a more skilled generation in the future to meet the evolution of the economy and social circumstances*". The future interdisciplinary character "*will need greater use of their legs, have greater mobility and connectivity through the global network*". Participant A physically changed the future interdisciplinary character to reduce the brain size because he believes "*one's brain will all be in the cloud*". He left a little space, however, for "*family and relationships*". He gave the future interdisciplinary character another arm "*to manage more technology, a shorter route to the brain, more eyes to see*", and reduced the size of organs.

The representative forms of the characters came in many guises as previously discussed, from physical hybrids to illustrated or written communication. The methods varied but the participants in their own effective way achieved meaningful and rich content. Most commonly the written word appeared. Figure 4 shows a *Wordle*[1] word cloud image of some of the participants' responses to the future interdisciplinary character exercise. *Wordle* is a web-based tool for generating word clouds from text. A *Wordle* word cloud gives greater prominence to words that appear more frequently in the source text. Thus, the larger the word appears in the cloud the more times it has been mentioned by participants.

4 DISCUSSION

The workshop participants involved in this project are from a diverse range of academic, industrial and institutional backgrounds and collaborated very effectively as individuals and in small groups to address the activities set by the workshop facilitators (authors). Initially the participants created their own unique T-shirt that gave a personal portrayal of themselves and how they approached their practice. The results from the T-shirt exercise show that there were no significant disciplinary or other patterns amongst the participants – each response was unique. The main aim of the T-shirt exercise was to initiate discussion amongst the participants and for them to get to know one another, which worked extremely well.

In terms of the future interdisciplinary character exercise, the participants all took enthusiastically to radically re-engineering the physiology of their characters adding limbs, removing heads, and so on and a number of strong themes emerged from this activity shown in Figure 4. As anticipated, characteristics such as "flexible", "driven", "robust", and "different" emerged as strong traits desired in this future interdisciplinary character. Moreover, skills and knowledge in things such as "research", "languages", "visual", and "environment" were significant.

A surprising characteristic omission, perhaps, not articulated by any of the participants during the workshop was "*talent*". Thierry de Duve, a Belgian professor of art theory, suggests that "*What deserved admiration in the accomplished artist was talent, not craftsmanship*". In other words, de Duve is claiming that skill can be acquired, but talent cannot [8]. The failure to recognise, liberate, and celebrate talent in individuals has been the focus of some research on education [9] and design [10, 11].

So to return to the question posed in the title of this paper, are we all designers, the answer surely has to be no! On an abstract level, we are all designers. Or at the very least have the capacity to design (*i.e.* we are all creative). However, just as we can all write poetry, stories and mathematical formulae this doesn't mean that we are all poets, writers or mathematicians. As de Duve and others have recognised, a key criterion for laying claim to being a designer must be that you have "talent" and are able to convince others to support that talent.

5 CONCLUSIONS

If we follow Donald Norman and others' claims that "*...we are all designers*" we could cite evidence for the growing phenomenon of "amateur designers"; but more pressing on design disciplines has been the contention that design is everything—from the design of objects that we use on a daily basis, to the design of cities, landscapes, nations, cultures, bodies, genes, and the way we produce food to the way we travel and build cars. Long before the global crises in the economic and political world we now

[1] www.wordle.net

inhabit, Ernesto Rogers succinctly described design's reach as "*...dalla cucchiaio alla citta*" (from the spoon to the city) [12]. Even before everything became design and Norman declared that we are all designers, Lazlo Maholy-Nagy structured his pedagogy at the Bauhaus around the general notion that "*...everybody is talented*" [13] and Joseph Beuys later enlarged the scope of Maholy-Nagy's statement when he professed that "*everyone is an artist*" [14]. All of these assertions illustrate what Thierry de Duve describes as the shift from the academic model to the modern model of art education, in which talent is replaced with creativity. Talent resided in the few and required skill, whereas creativity was universal and just required a medium for its expression. Superseding the modern in de Duve's critique was the postmodern, where attitude replaced creativity and required a "practice" for its form. Nearly 20 years later, design is just playing catch-up by imagining that "*everyone is a designer*".

The fundamental question for design is how do we move away from a talent spotting pedagogic model that boosts individuals in a star promotion system to a more democratized creative nurturing process with team based activities that are able to move fluidly across disciplinary boundaries. We graduate individuals with personalised scores based on their difference from other students rather than their collaborative efforts and skills. So how do we answer this central contradiction that design is understood as a talent, yet our educational models have to move beyond this in order to not only democratise the experience but also to supply the increasingly large commercial demand for design thinking? Can we go further and define talent as located within a disciplinary envelope whereas design thinking is a much more common creative activity that we see increasingly transcending boundaries?

ACKNOWLEDGEMENTS

This project is funded under the Arts and Humanities Research Council (AHRC) Research Network Programme (Grant Ref: AH/I022554/1). The authors would like to acknowledge the generous support of AHRC for funding the "We are all Designers" project.

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