

BOUNDARIES? WHAT BOUNDARIES? THE CRISIS OF DESIGN IN A POST-PROFESSIONAL ERA

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ABSTRACT

There is a developing awareness of the interconnected nature of design, its connections with other disciplines, and the convergence of different design disciplines as boundaries are increasingly contested and transgressed. Yet, to my mind, the most significant boundary currently not only being crossed but being dismantled is the boundary between professional and amateur, or more pertinently, between 'designer' and 'user'. Recent design methodology has stressed the importance of taking a user-centred approach, but has not envisioned a position where designer and user are essentially one and the same. This change in perspective has the potential to transform design education, design practice and the consumption of design.

As design practice became more specialised and the technology involved became more esoteric, amateur creative involvement in many disciplines became unattainable. Yet, emerging technologies today in fact offer the potential to reduce dependence on professional design, and afford access to advanced production techniques.

Describing a recent exhibition in which visitors to the gallery had the opportunity to not only create designs for products on screen, but have them actually manufactured and displayed as a part of the show, this paper describes the choices made by designers and craft makers developing such systems, and explores the tensions between professional and amateur creative activity. An exploration is also made of the issues raised for design education and the potential impact of systems that remove distinctions not only between different design disciplines but also between designer and user.

Keywords: Professional Design, Amateur Design, Generative Software, Direct Digital Manufacture

1 INTRODUCTION - DISAPPEARING BOUNDARIES

It seems to me that technological developments have for some time now been moving design into a Post-Professional era – a critical situation where the boundaries between professional and amateur design practice become so warped as to be all but indefinable and indeterminate. These boundaries, which appear almost imaginary to me now, have long been an area of personal interest, and the more I think about them and the more I explore them, the more confused and the more slippery they appear to become.

Looking at this situation from a historical perspective, I edited a special issue of the Journal of Design History on the subject of Do It Yourself, the aims of which arose from

a perceived need to generate a discourse around the interface between 'design' taken as a function of the activity of 'professional' designers and being part of an established cycle of the design, production and consumption of goods; and 'Do It Yourself' taken as its antithesis - a more democratic design process of self-driven, self-directed amateur design and production activity carried out more closely to the end user of the goods created. (Atkinson, 2006: 1).

As the introduction explained, 'Historically, productive and creative activities of this kind have allowed consumers to engage actively with design and the design process at a number of levels, and to express a more individual aesthetic unbounded by the strictures of mass-production' (Atkinson, 2006: 1). A strong element of interest here was that despite at times strong opposition from the professions themselves,

DIY activity [has] acted as a democratizing agency [by] giving people independence and self-reliance, freedom from professional help, encouraging the wider dissemination and adoption of

modernist design principles, providing an opportunity to create more personal meaning in their own environments or self-identity, and opening up previously gendered or class-bound activities to all. (Atkinson, 2006: 5).

And of particular relevance to the notion of professional/amateur boundaries, DIY was shown to ‘enhance people’s notion of themselves as an agent of design rather than merely a passive consumer’ (Atkinson 2006: 7).

I have followed the long-standing nature of these ideas further more recently in co-editing a second special issue of the same journal titled ‘Ghosts of the Profession’. In the introductory article ‘Professionalism, Amateurism and the Boundaries of Design’, Gerry Beegan and I have argued that given the porous nature of the boundaries between professional and amateur; these terms are impossible to define. We stated:

that professional and amateur practices are always connected, even when the relationship is one of repudiation. Professional practice defines itself by its distance from the unschooled practitioner yet, as the essays in this collection show, the vernacular is an inescapable part of modern design. At the same time, the professional is often a categorization that amateur designers reject, as a limitation to their creativity or originality’ (Beegan and Atkinson 2008: 1).

We also noted the undemocratic nature of the extant situation, in that ‘Professionalization acts as a system of exclusion by setting up criteria that intentionally, or unintentionally, bar individuals and groups on the basis of money, class, ethnicity and gender’ (Beegan and Atkinson 2008: 1).

Another negative aspect of the professional/amateur dichotomy was described by Philip Pacey: ‘the emergence of a profession can perhaps be thought of as, to some extent, the removal, from the public sphere and from a common wealth, of certain categories of skill and knowledge’ (Pacey, 1992: 218). Pointing to examples of lost proficiency among the populace of industrialised nations compared to the traditional transference of skills between generations in less industrialised societies, Pacey explores the question ‘has the professionalization of design deskilled or disempowered us?’

What is clear from these explorations, then, is that despite the aims of much professional design to disenfranchise the amateur user from productive creative practice, design has always been, and remains an activity engaged in by all at one level or another, and there is in fact little benefit to be gained from erecting obstructive fences. Rather, as Pacey proposed:

design history should not merely chronicle the separation of designing from making and the subsequent history of the design profession, but that it should place this in relation to a broader picture which encompasses the non-professional designing which preceded and has co-existed with professional design. By looking at its conventional boundaries in this way, design history can reveal not only what the professionalizing of design removed from the public sphere, but also what the design profession could give (over and above the dubious benefits of ‘designer’ commodities) to people at large. (Pacey, 1992: 224)

2 THE ROLE OF TECHNOLOGY IN TRANSGRESSING BOUNDARIES

As reported in both ‘Do It Yourself: Democracy and Design’ and ‘Professionalism, Amateurism and the Boundaries of Design’, when the exclusionary boundaries raised by professional design are crossed, the profession understandably raises concerns. In the case of DIY, technological developments enabled the commercialisation of previously restricted materials and products such as ready mixed paints, mass produced wallpaper and hardboard; and the production of a range of power tools, most notably the electric drill. These gave the user the ability to produce ‘professional’ results, and caused professional trades to complain about their livelihood being threatened (Atkinson, 2006: 7). Similarly, since desktop publishing software opened up graphic design to the public in the mid 1980s, professional graphic designers have regularly voiced concerns that the status of their discipline is being undermined. Given the expanding nature of the production and dissemination of such work in web-based material, often produced by highly

skilled yet untrained creative practitioners who have no interest in the notion of 'professional' status, the situation is getting worse. Following the publication of Ellen Lupton's book 'D.I.Y. Design it Yourself', in which she aims to provide amateur designers with a set of core design principles, the designer and design historian Steven Heller argued:

By making our work so easy to do, we are devaluing our profession. I like democracy as much as the next person, but because of new technologies, the definition of "amateur" in fields like graphic design, photography, film and music, among others, is being redefined. With everything so democratic, we can lose the elite status that gives us credibility.

Lupton countered by asserting:

Perhaps our credibility shouldn't come from design's elite status, but rather from its universal relevance to daily life. Not everyone is a design 'professional,' a person dedicated to solving complex problems and carrying out large, capital-intensive projects. But everyone can design elements of their own life, from their personal business cards or letterheads to their own flyers and wedding invitations. (On-line debate cited in Beegan and Atkinson, 2008: 3)

The really interesting aspect of this particular debate, which has been raging in the area of two-dimensional design for some time, is that the very same situation is starting to occur in three-dimensional design. Technologies of direct digital manufacture such as rapid prototyping, which use highly specialised machines to allow the remote creation of one-off objects from computer generated models, have been around for a number of years, but have only recently become cost-effective enough to use outside of mainstream industry. Starting to appear at prototype stages, though, are desktop versions of 3D printers, and it is only a matter of time before anyone can have such a device connected to their PC. The now familiar occurrence of the lay user producing amateur pieces of graphic design on an inkjet printer will be replaced with users producing their own amateur pieces of product design on 3D printers. When the realisation of this crisis hits, the outcry will, I'm sure, be loud. The advantage designers have (or should have) is that they have been here before, but that this time, they can see it coming. If design takes steps now to become more closely involved with such technologies, it might influence the ways in which such technologies finally appear and are used in the mass marketplace.

This is why, as a counterpoint to exploring these issues of boundaries from a theoretical, contextual or historical perspective, my practice-based research has been addressing the very same subject as a consequence of the pragmatic application of emerging technologies to design. For the past seven years, I have been coordinating a research group in the area of Post Industrial Manufacturing, in particular exploring the potential impact of randomly generative three-dimensional modelling software coupled with direct digital manufacture.

In collaboration with a computer programmer, an industrial designer and a designer-maker, I have been assessing ways in which such technologies might be created, adapted and employed by both professional designers and amateur users. The latest manifestation of this work was presented at an exhibition I curated in May 2008 at Hub, the National Centre for Craft and Design, and showcased the work of Justin Marshall (Automake), and Lionel Theodore Dean (FutureFactories). In the catalogue for this exhibition, I wrote:

Should we strive to make manufactured products identical? Should the designer or craftsman control every aspect of the appearance of the artefacts they produce? Should we place different values on designs created in their thousands and objects created individually? Should the involvement of the consumer in the creation of a product detract from or add to its value? Should the involvement of the computer in the creation of a product detract from or add to its value?

Automake and FutureFactories are examples of Post Industrial Manufacturing Systems. They are systems that transcend the limitations and expectations of established industrial design and production processes. In their conception, they liberate the designer from ultimate responsibility

for the manufactured form. In their execution, they liberate the consumer from the singular manifestation of design concepts. Post Industrial Manufacturing Systems have the potential to change the meaning of design. (Atkinson 2008)

Both Dean and Marshall worked in with CAD specialist Dr. Ertu Unver to develop software systems that can allow users to view various designed forms on screen. In the FutureFactories project, these are continually randomly mutating in real time. The user can not affect the form itself or the mutation in any way, but can decide at which moment they want to 'freeze' the constantly changing form to create a unique, one-off item. Once frozen, the relevant files are created by the computer and exported to a rapid prototyping machine to be manufactured. In the Automake project, a series of individual building block units having the ability to be connected together in various ways are assembled together randomly by the computer within a variety of three-dimensional mesh forms. These mesh forms can be selected and then manipulated, twisted and scaled by the end user to create unique shapes, and the particular building block units to be used to fill the resulting shape envelopes can also be selected. When the process is complete and the mesh envelope has been filled with a unique 3D model, the resulting file can be sent directly to a rapid prototyping machine for building in the same way as FutureFactories products.

One of the most rewarding aspects of the 'Automake and FutureFactories' exhibition was the ability for visitors to fully engage in the process of creative production. A computer and printer were set up, and the Automake system could be tried first hand. The results were printed out as colour photographs and mounted on the gallery wall, constantly expanding the exhibition. Additionally, an industrial sponsor of the show actually manufactured a selection of items created by visitors each week, and these too were put on display. Visitors returned to the show regularly and brought with them their friends and relatives to view their artistic output, expressing huge levels of pride in their achievements, stating that before this, they had never done anything creative.



Figure 1 Visitors to the 'Automake and FutureFactories' Exhibition with their creations

It is in the nature of generative systems that at least some of the control over the end result is relinquished as systems run autonomously. The nature of these products is such that the basic starting points are conceived by designers who specify the original forms and the rules of mutation or manipulation involved, but relinquish the appearance of the final product either to the computer or the user and in

fact may never see the final product created. In this scenario, who has designed the product? Where do the boundaries of design start and finish? As the user has made an aesthetic decision over the final form to be manufactured, should their input be considered part of the design process or not? Questions of authenticity, authorship and creative control are all raised here. Similarly, the nature of the objects produced is in question. Are they 'designs' in a traditional sense (as they have at least the potential to be mass produced), or are they craft (as they are one-off, unique pieces, albeit not made by hand). These problems of boundaries question the nature of design itself.

3 CONCLUSIONS

As we have seen, the boundaries between professional and amateur design, seemingly so solid, have in fact been constantly contested, transgressed and rejected. They have been seen as exclusive, obstructive and restrictive by those involved in amateur practices of DIY, and opposed from within by creative practitioners operating at a 'professional' level, who have seen such labels as a limitation on their freedom of activities.

It is clear from the research done and the work already produced that Post Industrial Manufacturing deals with a new kind of designing that has the potential to create a different role for the designer; where design decisions are made jointly or collectively by the designer, the computer software and the user. The most significant outcome of the research to date from my perspective is not the development of the generative systems themselves, but the creation of processes and procedures that enable individuals to engage in a form of design and production that questions their familiar relationship with consumer products (Atkinson et al, 2008).

As far as the issues of boundaries go, though, the work produced in the 'Automake' and 'FutureFactories' projects by the designers, and more importantly by the amateur users of the systems, seriously questions the role of the boundaries between professional and amateur and designer and user. How we address this issue will have significant bearing on the future of the whole design, production and consumption process. Whatever moves we make to tackle this crisis, the fact remains that it is not so much a crisis for design, merely a crisis for the design profession.

REFERENCES

- ATKINSON, P., 2006. Do It Yourself: Democracy and Design. *Journal of Design History*, 19(1), pp.1-10.
- ATKINSON, P. (ed.), 2008, *Automake and FutureFactories*. Hub, National Centre for Craft and Design, p. 15.
- ATKINSON, P., UNVER, E., MARSHALL, J. and DEAN, L.T., 2008, *Post Industrial Manufacturing Systems: The Undisciplined Nature of Generative Design*. Proceedings of 'Undisciplined!' Design Research Society 2008 Conference, Sheffield, UK <http://www3.shu.ac.uk/Conferences/DRS/>.
- BEEGAN, G and ATKINSON, P., Professionalism, Amateurism and the Boundaries of Design, *Journal of Design History*, 21(4), pp.1-9.
- PACEY, P. 'Anyone Designing Anything?' Non-Professional Designers and the History of Design. *Journal of Design History*, 5(3), pp. 217-225

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