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# **GRADUATING PRODUCT DESIGNERS AND THEIR ATTITUDES TOWARDS DESIGN RESPONSIBILITY: A SURVEY**

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## **ABSTRACT**

The notion of responsibility in designing is one that is becoming increasingly important, underlying significant areas of design activity. The research reported in this paper presents the results of a questionnaire study of 50 graduating product designers from 11 UK Universities. We find that students are focussed on environmental issues, have a very clear idea about where their responsibilities end for the products they design, but who display significant differences between the ideas about responsibility they espouse and their practice.

*Keywords: Design, responsibility, student designers*

## **1 INTRODUCTION**

A recent newspaper article, describing how architectural design students had been given the task of designing a torture device [1], has sparked debate about just what design students should be asked to do in their courses. However, the purpose of the project – a longer-term design exercise for Amnesty International – seems to have been, at least in part, to make students aware of their responsibilities as designers. This is an exceptional project but it highlights a subject that many people feel should be explicitly taught in design education – namely ethics and responsibility. Although there are areas of the design curriculum that do touch on ethical issues, notably sustainability and user safety, there is much more limited attention given to more general issues such as responsibility, particularly in relation to how it affects the process of design.

While methods and models help structure the design process, and address particular requirements, there are few guidelines to assist designers in the complexity of ethical decision-making in their work. Some ethical issues such as user safety or the need for sustainable products can be considered as ‘explicit’ ethical considerations. They can be taught or integrated into design briefs. Although sensitivity to these types of responsibilities is commonly developed in design education, designers also engage more implicitly with ethical issues. Evidence of this can be difficult to identify because ethical considerations can be intertwined with the analytic and synthetic thought processes of design [2, 3, 4].

This research focused on a group of students just about to enter the design profession. It aimed to find out what they felt their responsibilities as designers were, and to explore where these attitudes and opinions might have arisen from.

## **2 METHOD**

The research reported here reports on a questionnaire study of 50 (37 males & 13 females) undergraduate design students who were interviewed at their final year product design degree shows at 11 UK universities (see acknowledgements for details) in 2007. The nature of the degree shows required that the interviews be focused and a pilot study of five students at one degree show helped develop a final focused 10 minute script for interviews. The reason for selecting degree shows was twofold. First, they provided an opportunity to talk to a large number of students in a relatively short period of time and without too much prior arrangement. Secondly, and more importantly, we wanted to interview students in front of the projects they had been working on, and get them to reflect very specifically on those projects, not talk in more general and abstract terms. We were interested in their *practice* as designers.

The questionnaire focused on four key areas: (1) gathering an understanding of the role responsibilities play in the design process (2) seeing how these responsibilities are evidenced in the design process, (3) how these responsibilities map onto theories of existing design processes, and (4) the boundary points where designers consider their responsibilities end.

At each degree show participants were approached and asked if they would like to take part in a short survey about responsibilities in their design practice. Once they'd agreed, and consented to being tape recorded, the interview was conducted. Participants were free to take more time to expand on answers to questions if they wished, and some did, but generally interviews were kept short. As we thought there might be some difference between male and female design students we tried to keep an even balance between the two, although for some courses there was a clear bias of male subjects.

## **3 ANALYSIS AND DISCUSSION OF THE DATA**

The 50 participants produced just under 11 hours of data. An initial analysis selected a sample of these (4 male, 4 female from a range of universities) to transcribe fully. This allowed us to gain a broad understanding of the interviews and helped determine which areas to focus on. This provided a rough categorisation scheme which was then developed and refined as the rest of the data was analysed. The rest of the paper will talk about three significant themes that emerged:

1. The diversity of issues covered by the term 'responsible design';
2. Where students think their responsibility for products ends;
3. The comparison between what students say about their responsibilities in theory, and what they practice in their design work.

### **3.1 The diversity of issues covered by the term 'responsible design'**

The issues that students mentioned when talking about responsibility ranged from issues to do with the environment and material usage to the needs and wishes of stakeholders and safety issues concerning the product itself. These are perhaps issues that one would expect graduating students to touch on when asked about design responsibility – issues that probably derive from their education.

With an idea of the range of possible responses to what they understood by design responsibility, the analysis moved on to look at the *first* thing they mentioned; the issue uppermost in their mind. Table 1 shows the distribution of issues for this analysis. Students initial responses to ‘what do you understand by the term ‘responsible designing?’ reveal a focus towards “environmental issues” including thinking about “product lifecycle”, “recycling”, “materials selection”, and designing “sustainable products”. It was clear that students didn’t just want to be “creating landfill”.

*Table 1 Student’s first response when asked about responsible designing?*

Issue	Number of Students
Environment (including issues of sustainability, materials etc)	17
Design (including design methods, designing for people etc)	15
Safety/legal/standards (e.g. Disability Discrimination Act etc)	7
Stakeholders (e.g. clients, markets, business, consumers, public etc)	4
Ethics (more generally)	6

In contrast to environmental issues, concerns about safety came further down the list of initial responses. A possible reason for this is that safety issues, in the words of one student are “covered by law I guess”, which constrains what designers can do. There was a feeling that once there was a legal framework in place, responsibility could safely be passed further up the chain of organisation to ensure products passed any safety legislation. One student commented that “these days it’s very difficult to get something out there that is not 100% safe”. The dataset as a whole shows that 10% of students interviewed thought they could rely on the ‘company safety net’ in this respect. This contrasts with environmental issues, where legislation is hazy, and design recommendations tend to be guideline driven. With no formal control over this area of design, students obviously felt more personal responsibility.

Related to this the data often revealed a concern by students in more ideological areas, worrying about the effects on society as a whole. For example there was concern about not designing “frivolous things”, not wanting to “design something that would harm the environment or someone’s health for the sake of sales”, “[designing] to *help* people rather than just to... look nice” (*italics ours*) and a questioning of whether products would really be “beneficial” to society. There was an attitude of very much wanting to “design *for* something” for products that “will serve a function [and have] *real* purpose”. One student mentioned the need to “think well beyond your own mindset”, while another thought that “design that solves issues in a thoughtful way” was enough. A designer’s “responsibility to society” was mentioned three times. Against this was also the realisation that there were “professional responsibilities to meet the brief” and “responsibilities to your client”.

Students appear to want to be responsible to society, not to design frivolous things, and not to design something that would fix one problem but create another yet, ironically, the students who talked of longevity seemed to have rather a short-term longevity in mind (“a good amount of time – minimum of 2 years”, “a shelf life [of] 3 years before anything would need replacing”). One student told of a lecture she had attended where the lecturer had told her that “all [you] are going to design is ‘landfill’; it’s like people keep something for 2 years and then chuck it away”. One student’s take on responsible

designing was creating products that “not only work right here, right now, but in five to ten years [where they] can be just as effective as the first day [they were] launched”. The students generally thought of the long-term as being anything from 2 to 10 years and this is perhaps, more than anything, a reflection of the increased product lifespan demanded by industry to meet market demand.

### **3.2 Where a designer’s responsibility for their products ends**

This line of questioning – including rating on a quantitative scale – asked students how they would feel if their product, on display at the degree show, was (1) intentionally misused (a tailored ‘bad’ scenario was improvised) and (2) if their product resulted in accidental harm to a user. 31% of respondents felt a high level of responsibility for intentional misuse with 55% feeling a high level of responsibility where an accident had occurred. Some students were very clear that they would not be responsible for intentional misuse by users because they did not meet the intentions of the students for the product.

Some students indicated that once the product was out there on the market responsibility for the product lay with the user: “[it’s] really their business”, “if they misuse it then it would be their fault”. There were, not surprisingly, many comments suggesting misuse was “down to the individual, [it’s] beyond my control”, “it’s not really my responsibility how people use it”, “it’s difficult to design against it” and “you could use anything in a mischievous way”. However, there were more nuanced views. One student indicated that responsibility would transfer to the user after a period of time: “[the] user would have to take responsibility after a while”. Other students thought that if the product could be used in a way that was not intended then that was a flaw in the design: “If someone can get hurt even through misuse, [you] need to try and redesign”. One student suggested that it did not matter if it was a misuse or an accident – if the product fails, the designer fails, “the goal is safety”.

This begins to reveal the merging of designers intentions and design consequences; raising questions such as how far designers should think about possible consequences, in terms of both intentional and unintentional uses of the product. Designers are presumably keen to take credit where unintended consequences fall in their favour, so it is only logical that they should feel responsible when the converse happens, although this didn’t appear to be the case.

Students provided a range of examples when referring to intentions and consequences of design. Some students felt that if designers knew the consequences their products might have, then allowing them to go to market would be classed as irresponsible; an example cited here was that of the ‘Ford Pinto’, with design engineers knowing about the potential problems of fuel tank positioning. Other design examples referred to by the students included a film of the structural engineer who designed the Twin Towers of the World Trade Centre. The student recalled in the film that the engineer couldn’t have foreseen the impact of a passenger aircraft intentionally flown into the towers and was therefore not responsible. These exemplars clearly help students to think about the consequences of design, however, there was little real evidence of the application of this thinking to their own design projects.

The need to question and address worst-case scenarios in their own work (in terms of intentional misuse) did not seem to be something that current graduating designers do in their design practice. They did, however, appear to have good understanding of product failure, stress-analysis testing, the need to communicate how to use a product, and wanting to make products as foolproof as possible.

### **3.3 What students say and what they practice regarding responsibility in design**

Perhaps one of the most striking themes emerging from the data was the idea that students, while holding a particular ethical belief, practice something that conflicts with this belief. Sometimes the students are clearly aware of the fact that they can think one thing and contradict it by practicing another. One student when talking about where he considered responsibilities in the design process admitted that in theory it should be thought about early on, but in practice he will “usually just come back to them at the end”. Another student was very clear that he designed products depending on what he thought was right, but he accepted that if his contract required him to work on a project he was not happy about, then he would go against such beliefs to honour his contract.

There was a clear desire to design products that didn’t have a negative impact on the environment but a recognition that material choices were sometimes limited to environmentally unfriendly materials. One student was quite clear where their priorities lay: “there’s no point in creating environmentally friendly products if people do not buy them”. Another student offered a ‘hats’ metaphor to explain her role as a student designer; “you’ve got your university hat on... trying to get assessed and get your degree, and then you’ve got the client who wants something else, so... it is complex really.” It was striking how comfortable students seem to be with their practice conflicting with their ideology. Future research will explore such cognitive dissonance [5].

Students were wary of contributing to a consumerist culture with some indicating that they didn’t want jobs that involved creating fad products. Others seemed to have wearily accepted that they would have to do this: “designers have to join the rat race to make ends meet. And that’s sad and I know that’s what I will have to do and eventually I intend to make a change”. This again raises an interesting question: can long-term intentions for a sustainable society survive the shorter-term demands of consumerism?

## **4 CONCLUSION**

We have carried out a focused interview study of 50 final-year product design graduates and presented three main findings. First, that environmental considerations top the list of what students consider their responsibilities to be. Although they refer to a wide range of subjects relating to responsibility, the environment was clearly their number one concern. We speculate that this might be due to poor legislation in this area, together with a high media profile.

Second, designers are clearly able to hold a particular opinion about their responsibilities, but practice something different from this. Several mentioned that they didn’t want to just produce ‘landfill’ in their future careers, while recognising that product design is based on consumer demand for new products. This might relate to the design process itself, where students are able to, indeed taught to, live with conflicting constraints and ambiguity.

Third, students have a very straightforward view of the consequences of their products. This perhaps reveals their inexperience with regard to thinking through the possible consequences of what they do, both in terms of the direct use of the objects they design and in terms of more nebulous cultural impacts. It is perhaps in this area that design educators can have a bigger role to play, bridging the gap between the designer, the object, the user, and the society and showing how responsibilities transfer and inter-relate.

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