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Comprehending the Evolving Leadership Role of the Consultant Designer in the New Product Development Process in Mature Product Categories

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Comprehending the evolving leadership role of the consultant designer in the new product development process in mature product categories

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Seismic shifts in 21st century market conditions – globalisation, immediate digital communications, rapidly developing technologies, an ever more sophisticated, knowledgeable consumer – create a new landscape for organisations seeking to create products of greater value, which better meet evolving needs and desires. While the marketing-led approach, dominant in the past half-century, focused on persuasion, design, with its specialised tools, is suggested to be more adept and flexible than marketing at understanding and providing relevant value for today's consumer. A literature review argues that, in history, design has endured periods of particular strength followed by decline. This thesis examines the proposition that design is moving into an era of ascendancy. The literature review considers notions of design and designers' involvement in the new product development (NPD) process, and suggests that they are having a wider input of increasing significance in NPD. This acts as a base for developing understanding of the role of designers, and their interface with business.

Evidence was gathered in a case study approach at four industrial design consultancies creating products for a range of international clients, mostly in mature consumer product categories. Recorded interviews, observation and case diaries were analysed using an interpretivist approach, and themes were built from this data. Greater responsibility – leadership – on the part of design was manifest in numerous ways in the work of the designer and consultancy design studio.

The findings suggest an overall transition from a marketing-led NPD approach to one of 'design leadership'. First, designers are taking greater responsibility in solving problems of greater weight and complexity than in previous generations. The role and remit of the designer has expanded to embrace some of the tasks traditionally associated with the marketer. Second, the nature of the relationship between designer and client is instrumental in determining how the designer is involved in NPD. A growing closeness means that designers are involved from the beginning, or even pre-project, and this allows greater input in realms beyond product function and aesthetics. Third, consultancies are reorienting their offering to one of involvement across the NPD project. Studios consult in the clients' overall business strategy, and become coordinators – leaders – in the product's realisation. There is a shift from designers following marketers' suggestions to designers acting as consultants in the purest sense.

Design leadership denotes an approach whereby designers marry the sensibilities of business with the experiential approach of design. The findings of the study are synthesised in a series of models that act as a guide for consultancies and clients as they navigate the shift to greater design leadership. These models have considerable implications for design in practice, as well as for policy and design education. Chiefly, they become a substantive tool to enhancing the designer's empowerment in the business context, as they become involved in, and take decisions upon, a wider ranging breadth of activity of ever-increasing significance.

I hereby certify that the material which I now submit for examination for the award of **Doctor of Philosophy** is entirely my own work and has not been taken from the work of others, save to the extent that such work has been cited and acknowledged within the text of my work.

This thesis was prepared according to the regulations for postgraduate study by research of the Dublin Institute of Technology, and has not been submitted in whole or in part for an award at any other institute or university.

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detailed contents

1.1   Introducing the thesis

In this chapter, I set out a personal background to my research journey. I go on to make the case that design is being ushered into a new era of ascendancy, where the role of designers in the new product development (NPD) process is crucial. In that context, I then set out the research question. Finally, in section 1.5 I summarise the thesis structure.

1.2   Personal background to the research

I have always had an interest in art, design and the process of creating new ideas. During my undergraduate studies in French and marketing at the University of Strathclyde, I decided to focus a final-year undergraduate thesis on the contribution of design to marketing, using the new Apple iPod as a lens to argue for the power of design. During these studies, I gained a fascination for the designers themselves, and my research brought an admiration of the superstar designers of the 1940s and 1950s – Loewy, Dreyfuss, Bel Geddes. The awareness I had for the objects I used every day became acute, and each purchase decision I made became intricately, sometimes painstakingly, analysed.

This fledgling research catalysed my interest in the capacity and potential of design to bring about change. After my undergraduate degree, I persevered in getting the opportunity to work at the Mecca of design, Apple Inc. (in 2004, it was known as Apple Computer), at first in London, and then in Paris. I spent six months with Apple EMEA HQ in Paris, during which time the iMac G5 computer was launched. The workings of the G5 were packed behind the slender screen, the keyboard and mouse housed neatly under the aluminium stand. The iMac of 2004 was revolutionary in concept and design, and forms the

foundations for the iMac on which I write this thesis today (as well as most other PCs currently on the market).

iMac G5 was revealed to the press at the Palais de Congrès in September 2004. I was lucky enough to secure an invitation to the launch, which was conducted by Phil Schiller, senior vice president of Apple's product marketing (filling in during CEO Steve Jobs's leave of absence). Despite having been involved in the set-up of the subsequent week-long 'Apple Expo' during the preceding weekend, my colleagues and I were in kept in the dark about the new machine. The company is notoriously secretive to prevent leaks on new products. We filed from the conference centre bedazzled by Apple's latest boundary shift and, *en route* back to the Expo on the other side of town, noticed that the city had become awash with posters and billboards introducing its new infant.

Later that week, luck was once again on my side, as I had a chance encounter with one of the inner sanctuary – a senior Cupertino designer – in a locked car park. Christopher Stringer, a college friend of Jonathan Ive, had led the iMac project. Like a star-struck teenager, I was in awe of the designer as individual, and was immediately reminded of the fondness for, and legacy of, my 1940s and 1950s design heroes. His computer would undoubtedly be marked in history.

Spurred by the summer of Apple, I returned to the UK, this time to art college in London, to pursue postgraduate studies in design. Central Saint Martins College of Art & Design was a liberal environment in which to connect with like minds on all things design. My life became design–design–design, and after almost two years in London I decided to pursue this profession. Paris was my second love, and so I returned, this time to work in another design realm – advertising.

At Publicis Conseil (consultants), from the fifth floor of the Champs Élysées building commandeered by one of the world's largest advertising corporations, I toiled with graphic design projects. The fifth floor was reserved for the 'creatives' – young designers such as myself, art directors and copywriters, traffic and animation experts. Models would flit in

and out for castings, and the floor was awash with colour and images. It struck me how the fifth-floor group was always quite distinct from the account execs in the building: executives would check in on work-in-progress on the fifth, and check out as soon as possible. At social events, the two mixed like oil and water.

An interest in designers, the process of design, and the tensions therein, burgeoned. How does anything satisfactory get produced when the process is characterised by cultural friction? The possessions I coveted, including my own PowerBook G4 and subsequent MacBook Pro, had managed to survive this divide and come out intact at the other end. Why were Apple and its design-literate contemporaries so much more adept than their less stylish competitors? As I tentatively began to research this topic, I found that the interest in design was growing in industry. This was an ideal time of relevance to begin proper research. I was successful in finding a scholarship at the Dublin Institute of Technology (DIT) beginning in January 2007.

1.3   Time for design: an era of ascendancy

Design, in its aesthetic trends and its application to business, has in history undergone periods of transition linked to cultural changes and economic prosperity. From the 1700s, with Wedgwood's pioneering use of design to differentiate product lines and segment the market, design started to add value to the product. During the Industrial Revolution of the 1800s, time was of the essence as companies sought to sell vast quantities of generic products quickly: products were designed by teams of non-expert workers on a surface level only. Next, the economic boom and bust of the 1920s had another profound impact on the role of design in industry (Woodham, 1997): the depression forced business to turn to design at levels greater than solely aesthetics. During this period, a set of consultant designers (Raymond Loewy, Norman Bel Geddes, Henry Dreyfuss, Peter Behrens, among others) worked on industrial products for a range of clients, becoming household names in their own right for their contribution to making everyday objects more functional, usable and aesthetic. In this period, consultancy studios were especially marked by their size and

diversity: cross-disciplinary practice was the norm, and collaborations involved a breadth of expert employees, such as engineers and technicians. Henry Dreyfuss, in particular, practised an approach of 'total' design integration, where his studio became involved at every level in his client's organisation. In 1955 he published *Designing for People*, a book in which he underscored the proximity between design, commerce and management. Stressing the crossover in the design discipline, Dreyfuss quipped that the designer should be:

> equipped to work intelligently with the engineer, the architect, the physicist, the interior decorator, the colorist, and the doctor … He must be part engineer, part businessman, part salesman, part public-relations man, artist, and almost, it seems at times, Indian chief (in Freeze and Powell, 1998:210)

It was during this period of growing professionalism and status in design that, argues Sparke (1983), the formative elements of the consultant designer were synthesised into a unique formula where the role was to 'stand firmly in the centre of these specialisations and understand and synthesise them without specialising in any of them' (Sparke, 1983:3).

However, by the 1950s firms had access to the same production technologies, and competition accelerated. As products became more evenly matched, there was a reversal in the design and marketing hierarchy. The tools of mass media, mass advertising and mass marketing became more important selling points than the products themselves. As consumers were persuaded to buy on the visual imagery alone, marketers and advertising agencies were in charge of specifying what should be produced. Product quality decreased and design's role was styling the skin around these product ideas. Decorative design dominated until the early 1990s, when digital technology and globalisation started to confront business with new challenges.

A review of the literature of design's history in relation to industry and commerce has uncovered key periods of design ascendancy or decline in its relative importance within business, as summarised in Table 1.1.

Table 1.1: Design in business: charting periods of ascendancy and decline

Period	Key developments in design in business	Author(s)	General trend in importance
1700s	Wedgwood's pioneering use of design to sell more. Division of labour. Employment of master artisans. First use of different product lines to target specific consumer segments.	Forty (2005); Riccini, (1996); Smiles, (1905)	Ascendancy
1800s–1910s	Industrialisation leaves design in transition - mass production and mass consumption on the rise. Design becomes a self-conscious process, involving input of many specialists. Designers are no longer specialists: design can be done by many employees.	Coles (2005); Flusser (1999); Gropius (1919); Heskett (2001); Sparke (1983, 2009)	Decline
1920s–1939	Economic boom based on standardisation and mass production followed by bust. Post-crash, design became a system by which to compete. Designers become known in their own right.	El Hilali and Mathieu (2010); Freeze and Powell (1998); Gorman, 2000; Schonberger (1986); Woodham (1997)	Ascendancy
1950s–early 1990s	Rise of mass communication, mass advertising. Focus is on styling – product attributes are less important than brand and image. Design is manoeuvred tactically in business to drive sales.	Candi (2010); Heskett (2001, 2002b); Lambert (1993)	Decline
Mid-1990s–present	Globalisation hands power to consumer, and design becomes a means to differentiate in a crowded market. Digital and IT technologies change design methodologies: product life cycles shorten, and time to market decreases.	Borja de Mozota (2003); Forty (2005); Freeze and Powell (1998); Heskett (2002a, 2002b); Julier (2000); Lloyd and Snelders (2003)	Ascendancy

Source: the researcher

Current cultural and economic contexts are changing the commercial environment, and design now finds itself in a new era of ascendancy. For example, CAD/CAM (computer-aided design/manufacture), mass customisation and the issues around sustainability and the environment are having a profound impact on current design work (Borja de Mozota, 2003). Likewise, new market conditions – globalisation, immediate digital

communications, broader competition and rapidly developing and sophisticated technologies – have significantly changed the power dynamic: the consumer now has greater power over the producer than ever before (Kumar and Whitney, 2007), even enabling co-creation of products (Chrometzka, 2008). Knowing, understanding and listening to the customer therefore becomes paramount for organisations.

These external developments have in turn shaped changes inside the organisation. Marketing and design share an aim to satisfy the customer's needs: both act as a bridge between the producing, inward-facing operation and the consuming, outward-facing customer groups. However, like the situations I encountered on the Publicis fifth floor, the tools, approaches and outlooks of the two are distinctly at odds. Marketers tend to be more circumspect, and more explicit in asking exactly what the customer needs at the present moment. The traditional frameworks of the 'marketing-led' approach are proving too structured and rigid to cope with understanding dynamic cultural contexts and rapidly evolving consumers (Martin, 2009a). Design, on the other hand, with its focus on the future and improvement, is more flexible in its approach to uncovering and interpreting broader cultural and societal trends.

Design, it seems, is rising to the new challenges of the 21st century. It has become increasingly visible, desirable and worthy within firms, thanks to success stories such as Apple, Nokia and Braun. Apple's personal computer line has shown how design, in terms of functionality and product aesthetics, can add value and reinvigorate an aging product (Figure 1.1). Likewise, design's contribution to national economies is explicit: the New Labour manifestos of the late 1990s celebrated creativity, innovation and design's direct contribution to the UK economy. More recently, this was reflected in Ireland, where the government sought to establish the country as the 'Innovation Island' (Forfás, 2009), and with that, design as the means to achieve differentiation.

The first Macintosh of 1984 was the first to use the mouse and GUI interface

1997's PowerMac 6500 series retailed at $1800

Steve Jobs's return to Apple brought the first iMac, designed by Jonathan Ive in 1998

2002 'sunflower' iMac, led by Christopher Stringer

2004 iMac G5 unveiled in Paris was the first to shrink the hardware

Current iMac (v.2010) follows the ethos of compact elegance

Source: the researcher

In organisations, design and designers are being asked to solve problems of greater breadth, consequence and complexity. The constraints of a challenging competitive environment (where value must be found in many different ways) and the issues surrounding the environment and sustainability all impose new conditions and wield new influence over design decisions. The designer's role is even more weighty and complicated (Morello, 2000). Buchanan (2001:13) calls this phenomenon 'fourth order' design, where form, function and materials are only one part of a wider investigation whereby designers need to understand what makes a product 'useful, usable and desirable' for the people for whom it is intended.

Together, these shifts and concepts are shaping an era where design, its uses, its tools and its organisation are taking on an increased gravitas. Emerging evidence suggests that designers are embracing a role of greater leadership in the organisation's NPD effort. Helen

Perks and colleagues' article in the *Journal of Product Innovation Management* (JPIM) in 2005 centres on charting a range of ways in which designers are involved in product development. At the most sophisticated level, they find that designers are leaders in the NPD process. Anna Valtonen (2005) tracks an evolution in the role of the product designer in Finland, where the designer has taken a more rounded role in innovating new products. Roberto Verganti, in an article published in JPIM (2008), also suggests a broadened scope in the role of the designer – design-driven innovation – in creating new product meanings and strengthening brands. These authors contribute to the idea of design and the designer in transition towards a role of greater leadership and more significance within the organisation.

Design appears to be entering another 'Dreyfussian' era of vigour and importance. Dreyfuss was a forerunner in stressing that successful design deployment must involve complete integration into the corporation, and these ideas are resurfacing in notions of design thinking (e.g. Boland and Collopy, 2004a; Brown, 2009; Martin, 2007a, 2007b, 2009a, 2009b) which encourage an organisation-wide adoption of the tools of design. While Dreyfuss stressed the role of the designer as interdisciplinary and the buy-in from senior management as paramount in creating the conditions for design to prosper, the nascent notion of design leadership exists in wholly different times. It appears to have risen to prominence due to a number of different but confluent factors. There is, however, little consensus about what design leadership involves, let alone how these changes actually impact on the work of designers. This research seeks to explore and contextualise design leadership.

1.4   Research question

In investigating design leadership, a number of contexts are necessary to be able to understand and draw out the core ideas of the phenomenon, and these emerge in the initial review of the literature. First, the idea of design leadership has appeared most prominently in the literature covering how firms develop new products (e.g. Perks et al.,

2005; Valtonen, 2005; Verganti, 2008). This is more multifaceted than would first appear. At Publicis, I witnessed first-hand the tension between the creatives and the execs. The tough challenges of the 21st century mean that neither the tools of marketers nor the approaches of designers in isolation are sufficient to cope. Design leadership implies a new paradigm for NPD, yet there is little understanding about how this affects the place of design in relation to other business functions, nor about the composition of designers' involvement in the NPD process. The research therefore finds focus in how design leadership is manifested in practice.

Second, in NPD, products can be 'continuous' or 'discontinuous' (Trott, 2001). In radical, discontinuous innovation, science, engineering and R&D labour to find frame-breaking technologies. These constitute just 10% of all new products (Trott, 2001). The bulk of NPD is therefore mature and continuous. Finding the leading edge with such products is tougher: value has to be derived from means other than new technology. Development of these products is therefore less reliant on engineers and technologists, and more so on marketing and design. Thus, this research focuses on the role of design and designers' involvement in NPD in mature, continuous product categories.

Third, it is necessary to consider the means by which design is integrated in the organisation. Design can be in-house, outsourced, or a combination of the two. In-house design often exists attached to R&D or engineering functions, and unbundling the contribution of each discipline can be complex and problematic (Veryzer and Borja de Mozota, 2005). Outsourced, consultancy design, on the other hand, is the most prevalent approach (Design Council research, 2005). Analysis of external consultancy design offers the potential to isolate the richness of interplay between the design and marketing functions. This isolation of the design–marketing interface makes for a more interesting dynamic which is rapidly evolving, since consultancy designers must pitch for new work.

In focusing on consultancy designer involvement in NPD in mature product categories, there is potential to look at a range of design situations, thus providing a rich and valid

context in which to explore the nature of design leadership. The research question that emerged over the course of the first 12–15 months therefore became:

How is the leadership role of the consultant industrial designer evolving in the new product development process in mature product categories?

1.5   Thesis structure

This thesis is structured in five classic sections, summarised in Figure 1.2. The review of the literature is contained in Chapters Two, Three and Four. Chapter Two, entitled 'Design, designers, and design leadership', suggests that design is undergoing a transition in its use within the organisation, and charts the nature of this shift. It begins by looking at design's contribution and place in the organisation, positing a cultural disconnect between designers and business people. In NPD, the interface between design and marketing is particularly close, and is prone to conflict and misunderstanding. However, the new constellation of 21st century market conditions renders neither the marketing-led nor design-led approaches to NPD adequate for the designer or the marketer. While design thinking is suggested in the literature to bridge the gap between the two poles, little is understood about how it impacts on the role of the designer. Recent literature suggests the designer to be taking a leadership role in NPD. This research seeks to develop these ideas, and to comprehend the impact of design leadership on designers and the NPD process.

Chapter Three, 'Design and new product development', looks specifically at the contribution of design in the NPD process. Distinction is made between discontinuous, frame-breaking NPD and continuous, mature NPD. While discontinuous NPD is reliant on the input of R&D and engineering specialists, design's involvement is more pronounced in continuous styles of NPD, and this mode becomes the focus of attention in the research. Marketing also has acute involvement in continuous NPD, and the approaches and tools of design and marketing are compared. It is suggested that the dynamic digital age of the 21st century market has created the conditions for design to flourish.

<u>Figure 1.2: Thesis structure</u>

Introduction — **Chapter 1**

Literature review

Chapter 2
 Design, designers, and design leadership
Chapter 3
 Design and new product development
Chapter 4
 Design integration and the designer-client interface

Methodology — **Chapter 5**
 Choice of methodology . Research design . Data collection . Data analysis

Findings, analysis & integration

Chapter 6: Primary case study
 A broadened designer remit . Interface of designer and client . A changing business model
Chapter 7: Subsequent case studies
 Taking ownership of NPD . Value of designer-client interface . Reorientation in design consultancy
Chapter 8: Integration of findings and discussion
 Designer's work . Designer-client interface . Design consultancy

Conclusions & recommendations

Chapter 9
 Contribution of research
 Defining design leadership
 Implications for business policy and education
 Avenues for further study and limitations

Chapter Four, 'Design integration and the designer–client interface', unravels the issues surrounding how design is managed in the firm. The main approaches are in-house design, external consultancy design, or a mix of the two. While in-house design is normally attached to other departments (e.g. engineering or R&D), external consultancy design makes for an interesting context in which to isolate the dynamic interplay between designers and marketers, and it becomes the focus of this research. Much design, especially external, is mediated by the interface of clients and designers. The present

research has its goal in comprehending external consultancy design in its shifting role as NPD leader. Lastly, the research question is summarised.

Chapter Five explains the methodology of the study. A case study approach is adopted for its strength in exploring the space between theory and practice. The chapter outlines the researcher's ontological stance, and how this informs the empirical data collection. Four case study sites were examined. An 'exploratory', in-depth primary case study was followed by three subsequent 'critical' case studies of smaller scale. The practicalities of the fieldwork are detailed, including research sites and data collection tools adopted. Finally, how the data set is analysed, interpreted and theory built around it is described.

Chapters Six, Seven and Eight are in-depth compilations of the findings and analysis of the empirical study. Chapter Six deals exclusively with the findings from the primary case study at Design Partners, an international industrial design consultancy based in Ireland. Chapter Seven details findings from three subsequent case studies at high-profile consultancies: Designworks USA, Smart Design and frog design. Chapter Eight consolidates the findings from the four case studies to examine a reorientation of the nature of design consultancy. To summarise, consultancy designers and design studios are found to be in a state of flux as they seek to cope with a great deal of change in the terrain of design consultancy practice. First, designers are taking greater responsibility in solving problems of greater weight and complexity than in previous generations. The role and remit of the designer has expanded to embrace some of the tasks traditionally associated with the marketer. Second, the nature of the relationship between designer and client is instrumental in determining how the designer is involved in NPD. A growing closeness means that designers are involved from the beginning, or even pre-project, and this allows greater input in realms outside of product function or aesthetics. Third, this involvement across the NPD project is a driver to design acting as a coordinator, the 'glue', in the product's realisation. Consultancy studios are taking a greater involvement in, and ownership of, their clients' overall business and product strategies. Design's previous focus on 'just' products is replaced by a strategic and authoritative perspective. In general, there is transition from consultant designers following marketers' suggestions to designers acting

as consultants in the purest sense. A parsimonious model is presented in Chapter Eight which synthesises the integrated research findings. Based on the extent to which the designer is involved in NPD and the type of this involvement, the framework acts as a guide for consultancies and clients as they navigate the shift to greater design NPD leadership.

Finally, Chapter Nine discusses the conclusions, recommendations and implications of the research. It makes connections between the outcomes of this study and extant literature in a range of contexts. Implications of the research findings for managerial and policy levels are detailed. Significantly, I posit that design education is in need of an overhaul, in order to equip the designers of tomorrow with a new set of analytical and organisational skills. Lastly, limitations of the study and avenues for further investigation are proffered.

1.6   Conclusion

I have described the rationale behind the key decisions that inform this study. Throughout history, design's involvement in industry has always been influenced by societal, cultural, political and economic factors. A multitude of convergent issues manifesting over the course of the past decade or so – including globalisation, increasingly sophisticated technologies, more challenging competitive circumstances and increasingly powerful consumers – have brought design into a new era of ascendency. Design, it is suggested, has the tools to respond to 21st century market conditions and product complexity more flexibly than marketers and their conventional marketing approach. However, what this means for designers and organisations is unclear. This research seeks to explore and develop what design leadership actually means in practice.

2   chapter two: **design, designers, and design leadership**

2.1   Introduction

Design is undergoing a transition within the organisation. This chapter sets out to examine this change. Design has the potential to make a significant contribution to the organisation in areas far more substantial than just aesthetics. However, the unpredictable nature of design processes and problems leaves it in conflict with the approaches of business: a business preference for systematic analytics clashes with the intuitive methodologies of designers. While seemingly misaligned, the literature suggests that marketing and design, which work especially closely together in the process of new product development (NPD), strive to fulfil a similar set of objectives.

Neither the marketing-led nor the design-led approach to NPD is responsive to an increasingly challenging market environment. Both the business manager and the designer require a model that is more substantial. It is proposed that a balance between business analytics and design intuition is required, and this is termed 'design thinking'. However, further knowledge is needed to understand how these trends are impacting the work of the designer and shaping his/her greater role in NPD. Emergent evidence suggests that the designer is taking a leadership role in NPD. This research seeks to chart and comprehend the shape of design leadership, and its impact on designers.

2.2 Nature of design

There is much ambiguity surrounding the nature of design, the work of designers, and even the meanings of 'design'. The word 'design' derives from the Latin meaning 'sign' (Flusser, 1999). Its use has evolved historically as a bridge between the cultural gaps of art and technology since the Industrial Revolution (Coles, 2005). Design has uses as a verb and as a noun. It is at once (1) a noun to represent the field as a whole; (2) a verb representing the action of designing; (3) a noun, describing the concept; and (4) again a noun, meaning the concept made real (Heskett, 2002b). The ambiguity even in the meaning of the word leaves the design discipline, in a sense, fragmented. Its miscommunication in general discourse also causes confusion in how it is understood within organisations.

2.2.1 Design problems and processes

The design process, and the solving of design problems, has been examined extensively by design academics. Design methodology was first addressed as a field of enquiry in its own right during the Design Methods conference in London in 1961 (Jones and Thornley, 1963). Cross (1984) provides a widely accepted compilation of the early incarnations of design methodology. While it is outside the scope of this thesis to engage in full discussion on the nature of design problems and processes, a review of the literature has revealed some key characteristics of the design activity that affect its unfolding within the organisation. Table 2.1 presents this synthesis of design activity, especially highlighting its fluidity, the uncertainty of its outcomes, and the subjectivity of the designer.

In short, design activity is inherently unpredictable. Therefore, structured frameworks or methodology for the process have limited applicability, despite the efforts and ideas of the Design Methods movement (Cross, 1984), and contrary to Simon's (1996) rational problem solving paradigm. By nature, design is concerned with the unknown, and with possibility. Simon (1996) reports that the role of the designer is to improve existing situations.

Likewise, Roth (1999) suggests that 'designers have always been concerned with what "ought to be" rather than "what is"'. To that end, the Design Council (2007) suggests that there is no universally applicable design method. What works in one design situation may not be conducive in another situation. As a result, stages and activities in the design process do not readily conform to a formalised structure (Candy and Edmonds, 1996), and design may not be characterised by a strict set of criteria and procedures. Rather, it is emergent, arising from an undefined series of activities. Lawson (1997) posits that frameworks showing the design process are conceptual, rather than describing a sequence of actual activities.

<u>Table 2.1: Design activity, key characteristics</u>

Characteristic	Description	Author(s)
Evolutionary nature	Fluid, ever-evolving process	Dorst and Cross (2001)
	Initial problem state is liquid	Galle (1996)
Unpredictable outcomes	The aim of design is a synthesis of a new reality, consisting of both a physical component and an intended use	Akin and Akin (1996); Dorst and Cross (2001)
Wickedness of problems	Problems are irrational, without one predictable solution. They are illogical, dynamic, and the optimum solution hangs upon a range of conditions – no one correct answer	Rittel and Webber (1973)
Symbiosis of problem and approach	Structure of problem impacts how designers approach the problem, how they work, why they take decisions	Dorst and Cross (2001)
	Analysis of problem and synthesis of solution are concurrent	Cross (1997); Lawson (2005)
	Simultaneous cycles of evaluation, refining and improving in methodologies used by designers (e.g. sketching, rapid prototyping)	Manavazhi (2004); Suwa et al. (2000)
Objective and subjective	Requiring the balance of the society and people for which the product is intended while also being influenced by the designer's personal subjectivity, taste and style	Dorst (2006); Forty (2005)
Input of human actor(s)	The human actor imperative in the formulation of problems, and in the process of solving them	Schön (1991)
	Self-conscious design activity (i.e. for company/client) involves the input of a number of people	Alexander (1964)

Source: the researcher

In Table 2.1 summarising the characteristics of design activity, it is manifest that design is largely serendipitous and intuitive in nature, and that the designer is central to the activity. While it may be counterintuitive to impose regulations on such an unpredictable activity, frameworks of the design process, although conceptual and often conflicting and confusing, are also helpful. To improve and to understand better what we do, it is necessary to study existing practice (Tzortzopoulos et al., 2006). In short, routines and frameworks can act as guidelines for the attainment of peak performance, much like in sports training and schooling.

The Design Council's research does suggest that there is a sequence of universal activity. Its Double Diamond model (Figure 2.1) acknowledges inter-stage loops of iteration, and suggests that the design problem can only be defined after having progressed through stages of discovery and definition where the problem space is assessed and then evaluated. However, iteration and testing occur in the development stage, at which point it is also feasible that new information enters the process to change definitions. Therefore, the sequence cannot be considered to be entirely linear. Nevertheless, the recognition in the Double Diamond's overlapping stages of activity, and its value of iteration, is commendable.

There are also practical and commercial reasons for firming-up the design profession. During the Industrial Revolution the process of design became rooted in the group effort, and the majority of designers are employed by clients, or work for consultancies, in self-conscious situations (Alexander, 1964). The idea of process is a part of reducing risk, setting expectations and increasing repeatability (Andersson et al., 2003; Archer, 1974; Dubberly, 2004). When working within and for organisations, designers are usually required to formalise and communicate problem interpretations and solutions with the other stakeholders involved. What this means is that the identification of a process can reduce risk. Problems arising between collaborators in the network can be more readily resolved in the event of a breakdown (Hollins and Hollins, 1991). Therefore, the more self-conscious the design situation – that is, the more parties involved and therefore the

extended complexity of the project – the greater the need for a rationalised, formalised and verbalised process.

Figure 2.1: 'Double Diamond' design process
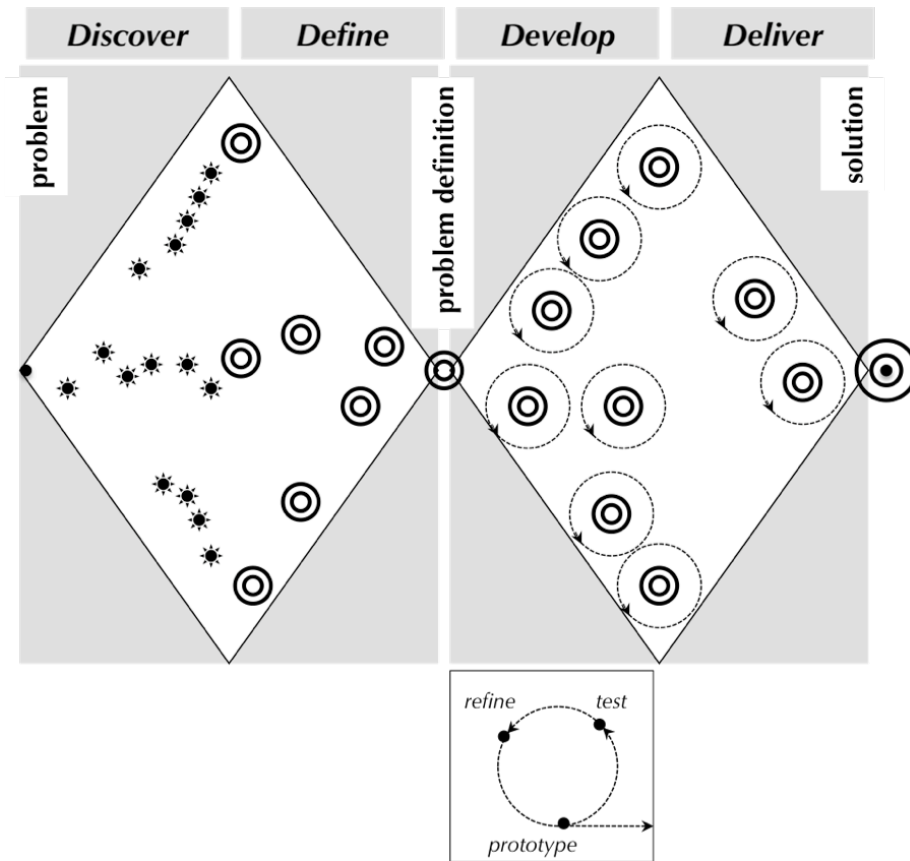
Source: adapted from Design Council, 2007

In the previous discussion, it has been suggested that design as both a discipline and an activity is clouded in ambiguity and uncertainty, and a range of divergent explanations of the discipline has been presented in a substantial academic debate spanning the past five decades (e.g. Bayazit, 2004). In business, a general perception of design as simply

aesthetics, surface, style and fashion has resulted from understanding design as a completed outcome – the noun – rather than as a fluid process – the verb (Boland et al., 2008; Liedtka and Mintzberg, 2006).

However, design's contribution to the organisation is multifaceted, reaching beyond mere styling. In Figure 2.2, three definitions denote a variation in how design has significance, applicability and tangibility in organisations. At one end of the spectrum is Simon's (1996) well-known definition that design is everything that changes 'existing situations into preferred ones' (Simon, 1996:111). Simon contested that everyone who attempts to improve situations can be considered a designer, and this acknowledges the discipline as far greater than simple styling. Cooper and Press's (1995) definition emphasises design as an activity, and suggests it has a multilayered and interdisciplinary applicability across the organisation, from traditional product design to planning processes. Whyte et al.'s (2003) definition also suggests a range of activities and levels at which design can be implemented. The authors crystallise design's value-add across the process of developing new products, services and processes. This multifaceted contribution to the firm is worth exploring. The following section looks at it in greater depth.

Figure 2.2 Understanding design: a spectrum of applicability in the organisation

Intangible   *Tangible*

"…changing existing situations into preferred ones" (Simon, 1996:111)

"an individual activity such as designing a chair, through to a corporate planning process… Its disciplinary boundaries range from engineering to fine art" (Cooper and Press, 1995:42)

"a range of activities that firms perform in the development, branding and marketing of new and improved products, services and processes… where the intellectual content for value-added in production processes is created" (Whyte et al., 2003:395)

Source: the researcher

2.3   Design contribution to the firm

The contribution of design as surface styling is found to have immense strategic importance (e.g. Persson et al., 2007, 2008). However, it is also proposed that design's reach, use and skill runs far deeper. It has long been considered that 'good design is good business',[1] and 'a powerful but neglected strategic tool' (Kotler and Rath, 1984:16). The present author's review of literature published over the course of the past three decades yields numerous ways in which design makes valuable contribution to business. Notably, it has strategic value to the organisation's business. This is manifest in many ways, ranging from brand identity, and customer loyalty to that brand, to strategic issues such as improving manufacturing efficiency and enhancing innovation. Ways in which design adds value generated from the review of the literature are summarised in Table 2.2.

It is easy to conclude that design's influence is wide-reaching in the organisation, and this is the conclusion of many commentators. For example, Cooper and Press (1995) and Murray and O'Driscoll (1996) both suggest that it can provide value at three levels – the product, augmented product and corporate levels. As a builder of company brands, it provides distinctiveness on the market (e.g. Olins, 2003; Ughanwa and Baker, 1989). Design can also be viewed as a tool in corporate decision-making, and can act as a bridge between functions (Lorenz, 1990; Rassam, 1995). It is argued that, on a macro level, design, innovation and creativity offer potential to boost national economies.

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1 Thomas Watson Jr of IBM is credited with this acclamation at a Harvard Business School lecture in 1974 (Walton, 2001).

Table 2.2: Design contribution to business

Area of contribution	Key ideas	Author(s)
Strategic importance to organisation	Attention to 'good' design is a valuable strategic contributor to company success	Jevnaker (2000); Kotler and Rath (1984); Olson et al. (1998)
	Distinctiveness of product on marketplace	Deschamps and Nayak (1993); Moultrie et al. (2007); Person et al. (2007, 2008); Peters (2000); Roy (1990); Whyte et al. (2003)
	Differentiator on the international stage	Ughanwa and Baker (1989)
	Builds corporate brand at several levels	Cooper and Press (1995); Lawrence and McAllister (2005); Murray and O'Driscoll (1996); Olins (1990, 2003)
	Sensor of new market opportunities and innovation	Bruce et al. (1995); Press and Cooper (2003)
Logistics and manufacturing	Assists in corporate decision-making (streamlining of products; development times; supply chain issues)	Desai et al. (2001); Mrazek et al. (2008); Swan et al. (2005)
Operational value	A 'bridge' between R&D, technology and management	Lorenz (1990); Rassam (1995)
Adds value for customers	Elicits emotional and behavioural response	Bloch (1995); Borja de Mozota (2003); Chitturi et al. (2008); Maciver (2005)
Economic performance	Design makes contribution in areas directly (price factors) and indirectly (non-price factors) related to economic value of products	Roy (1990); Walsh et al. (1988, 1992)
	'Good' industrial design aids corporate financial performance and stock market performance	Candi and Gemser (2010); Gemser and Leenders (2001); Hertenstein et al. (2005); Platt et al. (2001); Potter et al. (1991); Roy et al. (1998)
Value to national economies	Enhances countries' international reputation; shapes and builds economic standing	*UK:* Cox review (2005); Department for Trade and Industry (2005); *Ireland:* Forfás report (2009)

Source: the researcher

However, while this substantial evidence suggests that design is a valuable contributor to the firm, there is little empirical evidence to link it to business success. Press and Cooper (2003) suggest several reasons for this: (1) the problem of defining success and failure, (2) the difficulty in measuring the qualitative success factors, and (3) distinguishing the contribution made by design in isolation from other contributors to success. The difficulty in quantifying its contribution – as noted by Hertenstein et al. (2005) and Platt et al. (2001) – is at odds with the need to quantify and reduce risk in business. Moreover, the nature of design – innately imprecise, illogical and unpredictable, as suggested in section 2.2.1 – clashes with the 'bottom line' of business. In short, the jarring of cultures is often to design's detriment. In this regard, Bruce et al. (1995) and Freeze and Powell (1998) suggest that design is often one of the first cutbacks made by managers in times of recession.

The deployment of design in firms varies, often as a direct result of managerial attitudes (Hart and Service, 1988). There is a close linkage between design inclusion and corporate strategy, and this can determine which discipline dominates and leads NPD (Moll et al., 2007). Bruce et al. (1995) suggest two key barriers to design adoption in British small and medium enterprises (SMEs) which centre around a general misunderstanding between design(ers) and business(people): (1) a lack of awareness of the potential commercial returns on investment in design, and (2) the view that projects are one-off investments, rather than part of a long-term strategy. In general, the business people understand design as a noun, while designers strive to execute design in its sense as a verb.

The result of this is that design can be involved in different incarnations. For example, the Danish Design Centre's (DDC) (2003) 'Ladder of design maturity' (Figure 2.3) delineates four levels at which design can be deployed in the firm. The DDC's ladder suggests that on the most sophisticated, mature rung, design is deployed in all areas and plays a key role in strategy and decision-making. In contrast, at the earliest rungs it plays an inconspicuous and marginal role. However, whether or not design's evolution is linked to time is questionable. For example, Junginger (2009) also identifies varying levels of design penetration in the firm, and notes that some companies embark immediately on a course

where design is central to all corporate decision-making. The DDC's four incarnations of design in corporate strategy are interesting, and worthy of greater explanation, as follows.

Figure 2.3: Ladder of design maturity
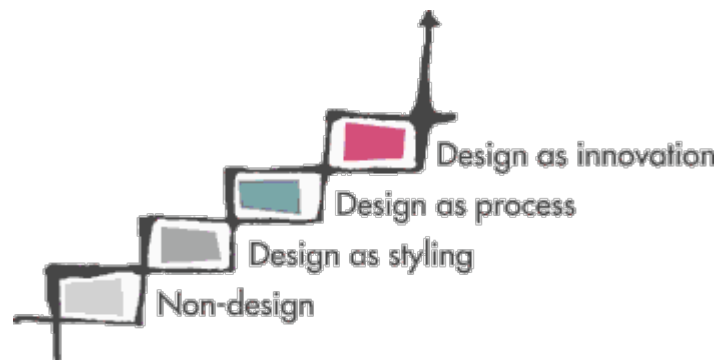
Source: Danish Design Centre (2003)

Non-design: there is no explicit recognition of design. It is an inconspicuous part of product development, performed by 'silent designers' (i.e. non-designers). There is no attempt to include views of the end-user.

Design as styling: acknowledges design only at its most simplistic level. Design provides the final aesthetic embellishment on the surface level of the product, and may or may not be performed by trained designers.

Design as a process: design is integrated early in product development, but is not the fundamental voice. Design plays a part in a multidisciplinary product development team.

Design as innovation: design is at the centre of the organisation's strategy and activities. The designer plays a crucial role in collaborating with senior management in all areas of the business. The design process is an important element, and combines with the company vision.

The DDC's model describes variation in how extensively design is included in the firm, and in who carries out its main tasks. At the right-hand side of the DDC's model are those

situations where design is incorporated fully in the company in a concerted design strategy. Integration can bring numerous benefits. For example, in their discussion of the design 'experience', Press and Cooper (2003) suggest that design is a means to allow customers to experience the company brand. The experience, encompassing both the tangible product and the intangible augmented product, is moulded over time to form a sophisticated holistic experience. In this sense, design influences and impacts upon everything that the company does.

However, there are many barriers to holistic design integration in company strategy. Investment in design can be significant, and to that there is attached the stigma of risk. The risk of financial loss is substantially higher at the start of projects involving product, engineering or industrial design (Bruce et al., 1995). In countering financial risk of design investment, Bruce et al. (1995) propose that adequate management of the design resource – including adequate briefing, communication, integration and conflict resolution – is crucial to design success. Management of design resources and projects is therefore of paramount importance in effectively deploying design, yet managerial attitudes can hinder effective design.

At the left-hand side of the DDC ladder, design integration is minimal and termed 'non-design'. Gorb and Dumas (1987) coin the term 'silent design' to describe the great deal of design activity that happens in firms which is not called design, nor undertaken by people called designers. Rather, silent design is 'design by people who are not designers and are not aware that they are participating in design activity' (Gorb and Dumas, 1987:150). This, along with a later developmental study by Dumas and Whitfield, highlights an ambiguity in the relationship between design and management, where management are active in contributing to the design process but never acknowledge their own involvement in design (Dumas and Whitfield, 1990).

Design by non-design professionals has significant negative repercussions. Moultrie et al. (2007) suggest that silent designers have detracted from the skill, training and professionalism of the design community. The work conducted by silent designers is often

detrimental to the quality, usability and desirability of products. Hence, industrial design activities are being 'marginalised' in business due to the pervading sense that anyone can design (Moultrie et al., 2007:336). In this regard, the intersection of design and management is crucial to design's embodiment within the organisation. Gorb and Dumas's (1987) research was seminal in its observations of the intersection between design and management, and it proffers explanation as to the mismanagement, even the neglect, of design within the organisation. This proposition is considered in the following section.

2.4   Design, design management and business

In the discussion on the Danish Design Centre's (2003) 'Ladder of design maturity', the interface of design and management emerged as crucial to how design is used in the firm. Furthermore, design can only prosper when it is adequately managed and organised (Bruce et al., 1995). However, the often contradictory natures of design and business create a tension between design and management, despite research charting design's contribution to business. The complexity of the design process, and the nature of the work with which the designer engages – such as the wickedness of problems, and the pivotal subjectivity of the human actor – can be extremely problematic. This contrasts starkly with the manager's quest for consistent, reliable, predictable outcomes.

The management of design has evolved to become an area of study in its own right; however, it has not benefited from the same development of its body of theory and core curricula as other commercially critical business functions (Press and Cooper, 2003). In response to its popularity in the 1980s, several texts are devoted to the topic of design management (e.g. Best, 2006; Boland and Collopy, 2004a; Borja de Mozota, 2003; Bruce and Cooper, 1997; Cooper and Press, 1995; Gorb, 1990; Oakley, 1990; Topalian, 1980; von Stamm, 2003), as well as considerable attention in academic journals (e.g. Borja de Mozota, 2006; Dumas, 1994; Fleischer and Liker, 1992; Francis and Winstanley, 1988; Gierke et al., 2001; Jevnaker and Bruce, 1998; Sebastian, 2005; Walsh et al., 1988).

Despite this attention, much ambiguity remains as to what exactly constitutes 'design management'. At its simplest level, it is the management of design projects (Best, 2006). However, for practitioners in general and academics in particular, exactly who manages design, what they do, and how they do it remains vague. Gorb (1990) describes design management as the deployment of available design resources by line managers in the pursuance of corporate goals. More specifically, Bruce and Cooper (1997) suggest that design management is the domain of marketing professionals who use design expertise to achieve marketing objectives.

With regard to remit, Valtonen (2005) posits that design managers cope with either the management of designers (the operational) or strategic design issues (the strategic). This focus depends on whether the designers are located within a dedicated design function (in a consultancy or an in-house team) or are solitary players within a large corporation hierarchy. Therefore, firm size and firm strategy are crucial determinants of design inclusion and management style. Firm size means that NPD can fall into the remit of top management in SMEs, while in larger firms it may be managed by marketing. Firm strategy determines where design lies in the corporate hierarchy; for example, in companies with a strong design ethos, designers may be included at top management level.

The variation approach to managing design appears to stem from education level, and is magnified in the business context. In higher education, it is unclear whether design management courses are best allied to business or design schools, or a combination of the two. Modular and devoted courses exist at business schools, while some design schools also attempt to integrate managerial modules into their curriculum. Topalian's (2002) matrix of types of courses available under the 'design management' banner emphasises a lack of standard curriculum and audience – a mix of managers and designers learn a mix of management and design-related subjects (Figure 2.4). Therefore, there exists a variation in whose concern design management is, and what their remit encompasses.

<u>Figure 2.4: Different kinds of courses proposed under the design management banner</u>

Audience

		Designers	Managers
Subject	Management	Management for designers	Management for managers
	Design	Design for designers	Design for managers

Source: Topalian, 2002:11

It follows that the responsibility for managing design is, at best, nebulous in many organisations. The review of the literature allowed the construction of Table 2.3, which charts a range of terms describing who manages design. From the design side, the language used in the literature – designer, design professional and design consultant – is clear in describing the idea of the practising designer. The business counterpart is more difficult to define. Non-design, marketer, organisational people, executives, managers and organisational leaders are all used in the design management literature to describe those from the business side of the firm. This table serves to crystallise the ambiguity surrounding how design is included and managed within the firm. The next section explores in greater depth the interrelationships between designers and their business-side counterparts.

Table 2.3: Contextualising the 'who' in the study

The designer	The business counterpart
Designer *(Bangle, 2001; Beverland, 2005; Heskett, 2001; Lauche, 2005; Martin, 2009a; Michlewski, 2008; Perks et al., 2005)*	**Non-design** *(Bangle, 2001)*
Design professional *(Bruce and Docherty, 1993; Bruce and Morris, 1998b; Person et al., 2008; Wong et al., 2009)*	**Marketer** *(Beverland, 2005; Svengren Holm and Johansson, 2005; Veryzer, 2005)*
Industrial designer *(Svengren Holm and Johansson, 2005; Valtonen, 2005)*	**Marketing professional** *(Bruce and Daly, 2007)*
Design consultants *(Hakatie and Ryynänen, 2007)*	**Organisational people** *(Jevnaker, 2005:25)*
	Executives/business executives *(Martin, 2007:6)*
	Managers
	– NPD managers *(Goffin and Micheli, 2010)* **– Business/corporate managers** *(Bangle, 2001)* **– Management/organisational leaders** *(Boland et al., 2008)*

Source: the researcher

While the terms used to describe designers and non-designers may vary, the literature charts a stark difference between them. Despite attempts to cement the contribution of design to the organisation (examined in section 2.3), the dislocation between creativity and business runs deep (Amabile, 1998). It can be attributed in part to the conflict in approach. The uncertainty of the design process clashes with a preference for predictability and logic in business. This disconnection has been examined in the literature. For example, Beverland's (2005) research examined the tension between artistic creation and commercial imperatives. Using a multiple case study approach, Beverland's study explored the relationships existing within the wine production industry. More specifically, the designer – the expert wine grower – is painted as 'egocentric', adhering to values that may be in conflict with the marketer's commercial imperatives. For designers, the conflict arises

when their feeling is to remain faithful to these design-based values while 'acting within financial and brand-based' boundaries (Beverland, 2005:200).

Other discord also exists. Chris Bangle, former design director at BMW, describes the conflict he encounters each day between the corporate pragmatism of the company executives and the artistic passion of the employee BMW designers (Bangle, 2001). In his role as design manager at BMW, Bangle acts as an intermediary between designers and 'non-designers'. In his personal account of his job, Bangle describes the secure niche he has created for the designers, in an attempt to placate both sides. For example, access to the design studio is restricted to designers or on appointment. The rationale behind this decision is to protect against external unproductive commentary about a project. Bangle argues that negativity only discourages the creative mind from experimenting with new ideas. This idea reinforces the creative psychology research by Barron and Harrington (1981), explored in the next section of this chapter. In short, Bangle's designers are emotional, sensitive, 'often egocentric', and do not respond well to cold managerial dictum. Designers are cosseted within this cocoon, and commercial executives are warned as to the dangers of criticism. However, Bangle notes that the company has allowed this cosseting due to its internal support of design. BMW's *fanaticism about design is matched only by the company's driving desire to remain profitable*' (Bangle, 2001:48).

The point of drawing attention to these accounts is their clear suggestion of a mismatch, a cultural disconnect, in the designer and manager's perceptions of how design is best managed. In short, this contributes to the distance between the disciplines within the organisation. The lack of a shared vision (Kristensen, 1998) and language (Murray and O'Driscoll, 1996) can lead to a relationship that is often characterised by tension and misunderstanding (Dumas, 1994; Svengren Holm and Johansson, 2005). Kristensen (1998) crystallises the differences in the core goals and expertise of design and business. Notably, Kristensen marks the difference in approach (conceptual versus analytical); desired outcome (quality versus production); and focus (user versus market) between design and business functions. While design looks externally to the end-user, where emotions and intuition are powerful and valuable, for the rationale to solve its problems, managers are

compelled by the intrinsic values of business leadership and organisational style, where systemic logic and minimisation of risk (financial and otherwise) are more powerful and valuable. The division is shown in Table 2.4.

Table 2.4: Divergent types of expertise

Design expertise	Business expertise
Design creativity/awareness	Commercial creativity/awareness
Conceptual–emotional	Analytical–synthetical
Visual	Quantitative
User-focus	Market focus
Quality	Production
Need	Demand

Source: Kristensen, 1998:220

2.4.1 Managing designers

The often contradictory expertise, goals and methods adapted by design and business make the case for a specialised type of management (Catmull, 2008). As described by Bangle's (2001) experience at BMW, design must be integrated adequately to accomplish and accommodate the needs of the organisation. However, this pursuit is problematic since the *modus operandi* of designers is quite different to that of other business functions.

The self-conscious, democratic qualities of design described in section 2.2.1 mean it can be structured, and this reduces the risk of design investment for the organisation. Paradoxically, the design process is simultaneously evolutionary, iterative, ad hoc, and often rests on the designer's subjectivity. Galle's (1996) research finds the design process

difficult to assess thoroughly, due to the tacit input of the human actor. Moreover, the necessity to justify design decisions can result in tension and dilemma for the design professional, due in part to the idiosyncratic and free flowing nature of the creative mindset (Maccoby, 1991; McFadzean, 2000). For designers, whose role bridges art and technology, whose approach is objective and subjective, and whose work is grounded in people and society, the challenge is to straddle the gulf between art and technology. Numerous academic studies examine the work and approaches of designers. This review of the literature allows some key characteristics of the designer's working processes to be highlighted in Table 2.5.

Table 2.5: How designers work: key characteristics of the design process

Characteristic	Description	Author(s)
Idiosyncratic	Creativity involves innate quirks, interruptions in thought patterns	Barron and Harrington (1981); Luck (2007); Macmillan et al. (2002); Suwa et al. (2000)
Draw from personal experience	Framing of the design problem/solution in a distinctive, personal way	Cross (1997, 2002b); Cross and Cross (1996); Galle (1996); Lloyd and Snelders (2003)
Broad approach to the problem	Drawing from a variety of disciplines to frame problems	Cross (1999, 2001, 2002a, 2004, 2007b)
Reference to frameworks underlying the problem	Curiosity in learning and improving upon situations	Cross (2002b); Lawson (2005)

Source: the researcher

The characteristics outlined in Table 2.5 – for example, an independent and free-flowing approach to designing – serve to illustrate the typical creative person's preference for working conditions that nurture intuitive modes of work practice. However, this preference does not mean that complete flexibility and freedom in the creative process is advisable. Leonard-Barton (1992) cautions that designers who have been empowered in a company with a culture of nurturing design can potentially carry their egocentricities to extremes and cause damage to the employer. For example, when rejection of ideas, lack of recognition, or excessive exercising of personal freedom (on the part of the designer) occur, feelings of resentment may fester in the designer, which can be damaging to the firm and project progress (Leonard-Barton, 1992). These types of cultures allow emotional and personal sentiment to build between designer and project. This can create situations where 'ownership' of a project becomes nebulous and troublesome. Bangle (2001) also reports that external input and criticism is often met with resistance, resentment and disregard.

What this means is that the management of creatives working within organisations is extremely complex. While the organisation's imperative means that frameworks on the design process are a necessary part of its management, conflicts can often arise. Therefore, the approaches and goals of design and business need to find resolution. Attention now shifts to how designers work within firms in an attempt to explore how the underlying motivations of design and business can be fused.

2.4.2 Designers in the organisation

The majority of practising designers work for companies or in consultancies. Three key studies have examined the working practices of designers in companies. First, Lauche (2005) examined design practice within a range of large and medium-sized companies. She suggests that certain psychological factors and organisational working conditions can affect design practice. Second, Michlewski's (2008) study of designers at four organisations attempts to understand the work-based and cultural attitudes of designers. Third, Jevnaker's

(2005) research on 'outlying' business and design collaborations focuses on the living–work relationships between designers and business people, and identifies top management support as an antecedent to better design integration. These studies are now described in greater depth.

Lauche (2005) examined the psychological factors affecting the output of 19 designers from a range of industries in Switzerland. Lauche proposes a framework, based on organisational and psychological theories, of the ways in which elements of the designer's role within the organisation contribute to positive or negative design outcomes (Figure 2.5). Good design practice, Lauche concluded, is facilitated and supported when: (1) the designers have high control over the design process; (2) the designers have high clarity of design-relevant information, (3) the designers have high volume of feedback on results, and (4) there is a high level of organizational support for design. Without these, low morale and frustration result, which impacts negatively on design results.

Michlewski (2008) attempts to draw out the composition of 'design attitude'. Using interviews at four design-led firms, he outlines the components of the work-based attitudes of designers themselves. Five categories were identified, which the author groups around one key idea: 'the creation of fundamental value through exploration'. The five categories identified by Michlewski underpinning the essence of the design process are: (i) the consolidating of multidimensional meanings, (ii) creation and bringing to life, (iii) the embracing of discontinuity and open-endedness, (iv) the embracing of personal and commercial empathy, and (v) the engaging of polysensorial aesthetics. Interestingly, these are also characteristics of the design process itself.

Figure 2.5: Criteria for job design and their influence on design outcome

Learned helplessness, slow process	← low — **Control over the design process** — high →	Experienced meaningfulness, task identity, ownership
Frustration, guesswork, wrong products	← low — **Clarity over the design process** — high →	Informed decisions, appropriate mental model
Feeling ignored, missed opportunities for intervention	← low — **Feedback on results** — high →	Improved products, satisfaction, learning
Frustration, burn-out, slow design process	← low — **Organisational support** — high →	Appropriate resources, importance acknowledged

Source: Lauche, 2005:194

Jevnaker's (2005) study looked at the 'living–work' relationships of designers and business people in order to understand rather than to prescribe. In her view, in the process of conceiving, constructing and designing something happens 'in the mess'. Jevnaker uses this term to describe the disarray of complex real-world situations where a range of collaborator inputs necessitates an ever-evolving design situation. She studied 'outlying' design–business relationships (i.e. those that have resulted in exemplary design) and identified a set of design activities that have enabled the production of outstanding design results. These design activities, such as (1) engaging in dynamic processes, (2) creating ideas from outside perspectives, and (3) mixing front-stage (in the boardroom) and back-stage (in the workshop) design-making, are often-unconventional. However, a joint enthusiasm on the part of all collaborators to innovate, and willingness to embrace a rich

patchwork of insight resulted in success through design. In this view, the dynamic relational aspects of design engagement also come to the fore, as the firms' success is considered to owe much to their championing and embracing of design. In short, Jevnaker concludes that the fragility of the design–business interface can also enable a wider potential for success when all parties are philosophically aligned.

These studies drive to understand the contribution and integration of design in business, and Michlewski (2008) and Jevnaker (2005) in particular suggest a movement in design's importance and an increase in its strategic value to the organisation. Michlewski (2008) and Lauche (2005) especially consolidate Barron and Harrington's (1981) view that creatives are motivated by factors other than money and recognition. It would appear that the degree of creative freedom offered to the designer as employee, support of their pursuits and inclusion-cum-respect for their paths of discovery can assist or desist in enhancing motivation, job satisfaction and are therefore conditions for bringing about positive design results. The studies also illustrate the potential discontentedness within the designer psyche brought about directly by working conditions and job remit. Finally, although Jevnaker's study does not comment on designer motivation, she suggests that where alignment is complete between designers' and businesspeople's approaches, design results stand to benefit. The alignment she found in her studied firms between designers and business people is quite striking. The next section considers this working relationship in terms of convergence as well as divergence.

2.4.3 Design and business: divergent *and* convergent

Ironically, while accounts of practice examined in the previous sections detail a tension between the functions, from a conceptual point of view designers and businesspeople have more in common than is first recognised (Borja de Mozota, 1998). Borja de Mozota's (1998) examination of the cognitive structures and approaches of designers and managers identifies broad patterns of convergence rather than of divergence. For example, both

disciplines aim to solve problems, both use creativity, and communication is of paramount importance to both. The cognitive structures are compared in Table 2.6.

Table 2.6: Design and management: comparative cognitive structure

Design concepts	Management concepts
Design is a problem-solving activity	Process–problem
Design is a creative activity	Ideas–innovation
Design is a systematic activity	Systems
Design is a coordinating activity	Communications
Design is a cultural activity	Organisational culture: rites, leadership style, symbols

Source: Borja de Mozota (1998:249)

There are indeed other similarities. For example, designers and managers traverse the same terrain: their ambitions have 'similar frameworks of definition' (O'Sullivan, 1998:71). Both design and managerial processes are systematic, and involve a great deal of communication and coordination between the people involved (Borja de Mozota, 1998). Both design and business are charged with problem-solving tasks, analytical and creative in their approach. The problems faced by both are ill defined. Both are uncertain, and must deal with ethical issues. Both have had significant problems reduced to calculation, and are thus reliant on the computer (Goguen, 2004) – CAD in the case of design, and numerical and statistical software packages in the case of business.

Therefore, at the conceptual level, alignment is clear, as both design and business are concerned with creatively satisfying people's needs and desires. With regard to this evidence, it is apparent that design and business are part of a unified whole that has the

potential to benefit from unification rather than division. Bruce and Bessant (2002) suggest that integration across the organisation allows a cohesive, unified and fundamental attitude towards design. Kristensen and Grønhaug (2007) argue convincingly that a convergence is more powerful than divergence, and that integration between design and business can be complementary, rewarding and of mutual value. The relationship between the design and marketing functions is especially close, and is worthy of a deeper discussion. From the practitioner perspective, Chhatpar (2007) calls for the inclusion of design from the early stages of developing new products.

2.4.4 Design and marketing: symbiotic connections and disconnections

The relationship between design and marketing is particularly noteworthy in the firm for the proximity between the functions, and even symbiosis in relationship and responsibilities (Patton, 2000). Both design and marketing act as the link between production (the firm) and consumption (the customer) (Kristensen and Grønhaug, 2007). Bruce and Daly's (2007) study reports that the activities and interests of marketing and design interconnect, and hence integration is appropriate and useful. R. Cooper (1994) suggests that the domains of the two functions are so interrelated that each element of the marketing mix could not be operationalised without design, since it has profound impact on each level of the traditional four Ps of marketing.

Despite this symbiosis in task, marketing and design are subject to stark disparity (Table 2.7), manifested in: (1) backgrounds; (2) their focus and objectives in product development; (3) the party they aim to satisfy; (4) modes of creation and organisation, and; (5) deliverables (Kristensen and Grønhaug, 2007). This relationship is particularly pronounced in the new product development (NPD) activity, which is often managed by marketers. While there are many inputs in NPD, design and marketing are the crucial components, as both try to 'fit' the product to the user in the market context, often by different means. This can often result in misunderstanding, tension, even a tug-of-war (Svengren Holm and Johansson, 2005). Research on the conflict suggests it arises from

marketers having inadequate time, specialist design training and understanding, as well as poor communication and an adherence to market research (Svengren Holm and Johansson, 2005), and disagreement in project objectives, lack of mutual recognition, an asymmetry in information sharing (Kristensen and Grønhaug, 2007). These are key hindrances to a fruitful and peaceful partnership.

Table 2.7: Functions of marketing and design

Function	Marketing	Design
People	Business school MBAs	Design schools
Key focus and efficacy	Business, e.g. market share, brand equity	Practical solution, beauty
Primary stakeholder	Customer, co-creator	User, co-creator
Work organisation	Formalised	Informal, 'organic'
Deliverables	Verbal/written analyses and recommendations	Physical models and visual representations

Source: Kristensen and Grønhaug, 2007:820

This discussion highlights a symbiosis in design and marketing goals, while also illustrating a clear difference in approach. In NPD, the role of marketing is to recognise and anticipate untapped potential within a market place, and to conceive suitable products to fill this gap efficiently and profitably. Yet design, with its specialist approaches and methodologies, makes it well placed to respond to, and even predict, consumer needs (Veryzer and Borja de Mozota, 2005). Designers' focus on users and usability, along with their testing and prototyping tools, renders their input particularly valid, as it enables errors to be corrected and ideas validated before substantial investment has been made. This symbiosis makes the case for strong direction and clear corporate strategy in the development of new

products. Modes of 21st century product innovation, and design and marketing's input in modern-day NPD, are now examined.

2.4.5 Design and marketing input in 21st century NPD

The traditional modes of product innovation, 'market pull' and 'technology push' – illustrated in Figure 2.6 – are fundamentally opposed. In the technology push approach, firms focus effort on the acquisition of knowledge about technological possibilities, and in constructing new products around this technology (de Assunção, 2008). This model implies a passive role for the user, and the market place is simply a 'receptacle' for firms' technological endeavours (Rothwell, 1986). The antithesis to this model, market pull, involves research on demand: the focus is on learning what the customer needs and desires, and creating products to match this. Rothwell terms these the 'traditional' models of innovation.

Figure 2.6: Two extreme models of the innovation process – the 'traditional' views

(a) Science discovers, technology produces, firm markets

Basic science → Applied science and engineering → Manufacturing → Marketing →

(b) Need pulls, technology makes, firm markets

→ Market need → Development → Manufacturing → Sales →
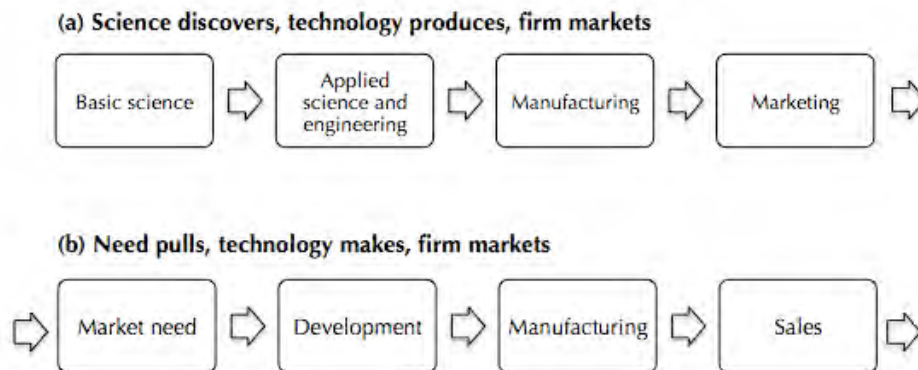
Source: Rothwell, 1986:110

Leading product development by either marketing or technology is unfavourable and ultimately damaging. It can result in products unsuitable for the market (Bailetti and Litva, 1995). A recent power shift from producer to consumer – aided by, for example, sophisticated communication technologies, globalisation, reduced costs of labour, ease of replicating technology, shorter times to market, consumer unpredictability (Kathman, 2002; Kumar and Whitney, 2007) – has resulted in a discerning, educated customer, whose satisfaction is at the heart of success. Rothwell's (1986) traditional models are rendered outmoded in modern-day competition. Another approach is required to answer to the dynamic, complex and ever-changing market environments of the 21st century.

Emergent theory in the literature suggests that that solution lies in linking the expertise of the design and marketing disciplines. Martin (2009a) suggests that the desired optimal is a situation where each learns from, recognises the importance of, and values the other. This utopian equilibrium between business analysis and design intuition he terms 'design thinking'. This approach begins to find unison between the ideals of design and business. The literature review continues to explore this developing search for harmony. In particular, it looks at the implications of the evolving 21st century market for design and designers.

2.5 Joining the dots between design and marketing

The evidence presented so far suggests much disharmony between marketing and design. Martin's (2009a) 'predilection gap' model (Figure 2.7) exhibits the polar opposition between the approaches of design and marketing. On one hand, marketers adopt an 'analytical', systematic approach seeking consistent, replicable outcomes founded on methodological rigour. These frameworks are preventative in allowing action and initiative based on anything other than 'actionable' data (Boland et al., 2008), i.e. those founded on the premise of logic, rigour and credibility. This is contrasted by the 'intuitive' cognitive approaches favoured by designers who use their own judgment and bias to produce

relevant products. For designers in business, there remains tension regarding the process, what knowledge is required to design, what constitutes as the 'right' knowledge, who has insight, who can participate and whose voice is more legitimate (Carvalho et al., 2009). Designers are often challenged to defend credibly an intuitive, instinctual 'feeling' to their marketing counterparts. The values and goals of marketing and design are also opposed: while the designer's objective is 100% validity in the ideas they create for the future, marketers desire 100% reliability in the potential of success of these ideas – a reduction in risk.

Figure 2.7: A predilection gap
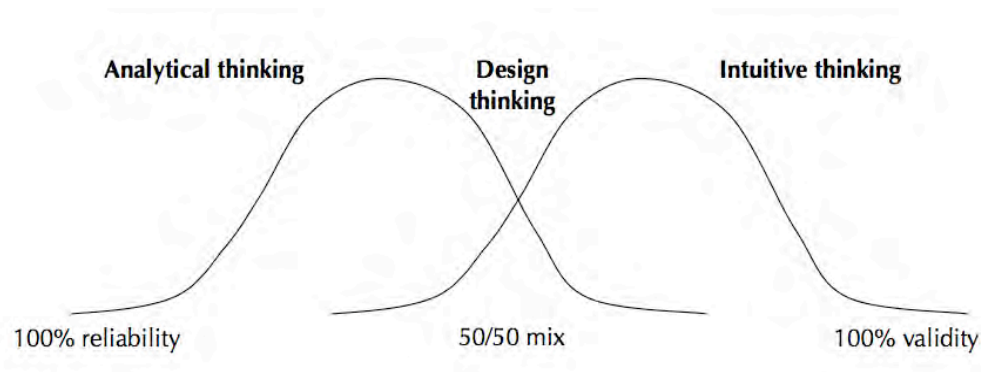
Source: Martin, 2009a:54

Since paths of NPD are underpinned by firm focus and strategy, this focus determines who has the definitive input in NPD: the designer or the marketer. In 'evolutionary' firms a traditional style of business leaders is dominant who consider design an 'add-on' to existing practices (Borja de Mozota, 1998). This reluctance occurs even despite the modes of integrative NPD that started to become fashionable during the 1990s (e.g. Brown and Eisenhardt, 1995; Hart and Baker, 1994). In the quest for reliability, design expenditure must be micro-justified to eliminate risk. In contrast, in 'revolutionary' firms, design is wholly recognised and integrated. Design processes are less quantifiably rigorous, and

more dependent on designer intuition. This review of the literature allows the suggestion of two polar opposed ways of design's NPD involvement: marketing-led NPD, and design-led NPD. Some key features are identified in Table 2.8. Especially noteworthy is the division between systematic and intuitive approaches; planned versus serendipitous processes, and limited versus fundamental designer involvement. This classification develops Borja de Mozota's (1998) distinction between the evolutionary and the revolutionary organisation.

Table 2.8: Design's place in NPD: polarity in approach

Marketing-led approach	Design-led approach
Systematic NPD approach, founded on logic, rigor and credibility (Boland et al., 2008)	Intuitive approach to NPD (Bangle, 2001)
Planned structured process (Hart and Baker, 1994)	Sensing, serendipitous discovery path (Cross, 2002b; Rittel and Webber, 1973)
Plans reinforced by detailed market research and quantitative data (Hart and Baker, 1999)	Intuition and experience of more value than statistics (Cross and Cross, 1996)
Idea sourced from consideration of market opportunity (market push)/emergent technology (tech pull) (Rothwell, 1986)	Idea generated from unknown depths of designer mind (Lloyd and Snelders, 2003; Martin, 2009a)
Designer engaged later to solve a pre-determined problem (Borja de Mozota, 1998)	Designer engaged to determine a solution (Borja de Mozota, 1998)
Focus on production (Kristensen, 1998)	Focus on usability and aesthetics (Kristensen, 1998; Kristensen and Grønhaug, 2007)
Designer is a functional specialist in a multidisciplinary team (R.G. Cooper, 1994)	Designer has pre-eminent role in a multi-disciplinary team (Ulrich and Eppinger, 2008)
Combined effort of team of specials in a range of fields (Cooper and Kleinschmidt, 1986; Hart et al., 1999)	Designer has decisive say (Verganti, 2008)
Limited designer NPD input	Fundamental designer NPD input

Source: the researcher

However, despite this polarity, there is also evidence of an increased recognition in design and marketing for the other's merits. For example, there is a greater willingness to compromise, and reward in compromise for both sides (Beverland, 2005; Garber et al., 2009; Jevnaker, 2005). A harmonious relationship is found to be strategic, productive and rewarding (Boland and Collopy, 2004a, 2004b; Jollant Kneebone, 2002; Kristensen and Grønhaug, 2007; Verganti, 2003; Yoo et al., 2006). Martin (2007a, 2007b, 2009a) suggests that each can learn from the strengths of the other.

This is particularly pertinent in the complex, dynamic, ultra-competitive environment of the 21st century, where the customer wields unprecedented power. Neither the systematic nor the intuitive paradigm alone is responsive to the requirements of designer and marketer alike, and the imposition of a choice of marketing-led or design-led can be harmful to the organisation. Leonard-Barton (1992) suggests that while core competencies are necessary, they can also hamper the course of innovation, as sanctioned interest in the firm can result in an obsession with a competency that is becoming redundant in the marketplace – a competency trap. Design thinking, drawing from both sides of the polarity, is considered to fill this gap (Dunne and Martin, 2006; Fraser, 2007).

Brown (2008, 2009) defines design thinking as 'a methodology that imbues the full spectrum of innovation activities with a human-centred design ethos' (Brown, 2008:86). Recent interest in design suggests that the creative tools and approaches of design and designers can be harnessed by those organisations wishing to better meet, foresee and predict the needs of their customers (e.g. Body, 2008; Nussbaum, 2004). In Brown's examination of design's contribution in a range of situations at US–UK design consultancy IDEO, he suggests that design thinking can be used strategically to convert need into demand (Brown, 2009).

While competitive environments become more complex, global, and fiercely competitive, design thinking is suggested to offer the means by which to balance the 'left brain'

(associated with analytic thought, logic, language, science and mathematics) approach dominant in marketing and business, and the 'right brain' (associated with holistic thought, intuition, creativity, art and music) approach dominant in design. Balance, mutual understanding, and better integration are required (e.g. Golsby-Smith, 2007) to meet the evolving challenges of the current competitive climate where value capture is the focus of a winning corporate strategy (Martin, 2009b).

2.5.1 Comprehending the shape of design leadership in NPD

However, while design thinking has its emphasis on embracing both approaches throughout the organisation, and while in principle this is the ideal scenario, in practice finding the 'right' balance is problematic. As design becomes more prevalent, organisations are increasingly turning to it to add value to the basic product offering. Few, however, are adopting a product strategy that integrates design from the outset of NPD, despite the range of value it can imbue in the firm running far deeper than product aesthetics (e.g. Cooper and Press, 1995; Murray and O'Driscoll, 1996).

Both NPD and modern-day industrial design are extremely complex and multifaceted, involving increasingly large numbers of stakeholders. While a fairly recent study describes a move from marketing-led to design-led NPD (Perks et al., 2005), there is shortcoming as to design's involvement in the NPD. Jevnaker's (2005) research laid the foundations of comprehending how designers work for manufacturing firms, but her focus was on the acceptance of design techniques on the part of the client. Empirical data on designers' role and work in NPD remains limited (Jerrard et al., 2008; Kim and Kang, 2008).

Perks et al. (2005) suggest that industrial design is gravitating to the role of NPD leader. Its transition can be mapped on a continuum, as shown in Figure 2.8. Design was traditionally a final, surface-deep NPD add-on, shown at the left-hand side. In the 1990s, it became a player in a multidisciplinary NPD process. Perks et al. find that some companies are becoming led by design from the outset of NPD, shown at the right-hand side of the

continuum. To understand in greater depth the nature and level of changing designer involvement in NPD, this research seeks to contextualise the growing design-side leadership.

Figure 2.8: Design NPD involvement continuum

| Functional specialism | Player in a multidisciplinary team | NPD leader |
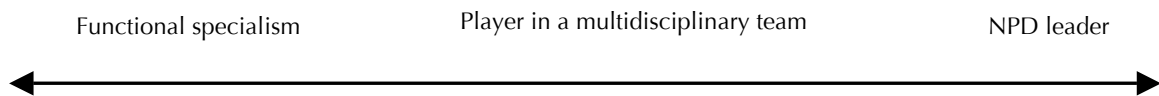
Source: adapted from Perks et al. (2005)

2.5.2 Accounting for the shift to design leadership

Perks et al. (2005) and others (e.g. Valtonen, 2005; Verganti, 2008) posit design to be evolving its reach and impact within business, and taking on a role that has greater strategic importance to the organisation. Perhaps it is the designer who is better placed to strategise, in this digital, global, consumer-empowered era, using his or her intuitive approach, given the businessperson's reliance on numbers and quantification, and lack of heed for the emotional and illogical.

As described in the previous section, the complex, multifaceted conditions of modern-day NPD seem to be driving the prevalence and attractiveness of the tools of design. For example, designers can listen to – 'market sense' – markets and buyers in ways that the traditional marketer cannot (Owen, 2001). Verganti (2006), in his examination of the innovation strategies of manufacturing firms in Lombardy, finds that the banding together of communities can bring about 'design-driven' innovation. In this approach, a loose multidisciplinary design 'cluster' – comprising architects, critics, photographers, suppliers,

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curators, publishers, and craftsmen – meets several times per year to engage in discussion with the aim of reassessing meanings, identities and directions of products. This method of conceptual collaboration occurs before any type of product development work is undertaken.

This designer led-collaboration is believed to strengthen competitive success of the firms in the network (Verganti, 2008). Indeed, designer-led collaborations can be precursors to wider trends (for example, the design language of the influential Italian Memphis design group, led by Ettore Sotsass in the early 1980s, was created in a similar collaborative approach and had impact across culture). Elsewhere, there exists a strong tendency for inter-organisational partnerships, like in Silicon Valley, technological firms cluster (e.g. Apple, Google, Microsoft, Yahoo!, IDEO) and in Helsinki (Nokia operates at the hub of a network of cross-functional experts, comprising design schools, museums, design-led associations and research centres, and has reinterpreted the appeal of mobile telephones). In these examples, design and designers are held in esteem, and those organisations have been highly successful in their respective fields.

As products become even more complicated and multifaceted, and production methods become faster and more sophisticated, the stringent tools of marketers – for example in industry and customer research – become less well suited to comprehend and cope with a dynamic and evolving world. In an environment where customers, trends and technologies are unpredictable, the rigid approach of marketing attempts to interpret the complex and intuitive in a formulaic and structured way. By contrast, designers have a worldview whose reach encompasses a disparate array of influences and domains. Its roots lie in bridging art and technology. As designers embrace and develop the new – as they seek out, understand and respond to an evolving complex world, and the dynamic desires of discerning 21st century consumers – perhaps they are better able to embrace the balance between the left and the right brain.

Furthermore, the value of intuition and instinct is being upheld in current thought. For example, Gladwell (2006), in the book *Blink*, argues that the rapid cognition that happens

in the 'blink of an eye' is, in fact, rational. Rather than long periods of deliberation, stasis analysis and data gathering, Gladwell suggests that instant conclusions are extremely powerful and just. Pink (2006) posits that the right-brained qualities associated with creativity and empathy are becoming of more importance than the left-brained. Organisations such as Bang and Olufsen (e.g. Austen and Beyersdorfer, 2007; Bang, 2000; Greene, 2007), Google, Pixar (Catmull, 2008), and Apple (Yoffie and Slind, 2008) have harnessed the power of creativity, and these companies pride themselves on qualities in innovation, progression and renewal, and importantly, in design.

2.6   Conclusion

In summary, design is a complex process that is difficult to manage, predict, and rationalise. These characteristics are challenging for firms attempting to encourage and enable better design. However, the balancing of design's innate paradoxes – for example, its marrying of technology and art, the rational and irrational, subjectivity and objectivity, and its concurrent concern with the past, the present, and the future – contributes to its potential for organisations. Scholars and practitioners identify a novel, emerging leadership role for designers, different from one that is purely design-led.

Despite an ambiguity in understanding its role and management, and despite a tension-in-practice in its execution, design is gaining in visibility and momentum. Managers are learning about the principles of design thinking, yet little is known about the shift to design leadership for the designers. This research seeks to chart and comprehend design's new strategic role in the organisation from the designer's perspective. The next chapter looks in greater depth at design's involvement in NPD.

3   chapter three: **design and new product development**

3.1   Introduction

Product design has its roots in industry (e.g. Heskett, 2001; Sparke, 1983). However, the role of design and designers in new product development (NPD) has always been problematic and complex in its approach, and in the extent of its involvement (Jevnaker, 1998; Leenders et al., 2007; Veryzer and Borja de Mozota, 2005). As a result, further research is required to establish how industrial design can be integrated into NPD (Goffin and Micheli, 2010; Verganti, 2008). Recent evidence from the literature suggests that the role of designers in NPD is indeed becoming more strategic, and that design is taking a leadership role (Perks et al., 2005; Valtonen, 2005; Verganti, 2008).

This shift towards leadership is the focus of attention of this chapter. It is suggested that different modes of NPD require a different design involvement, and that continuous styles of NPD have the most prominent input of design and marketing. The interface between designers and marketers, and their approaches to NPD, is considered. As the power dynamic shifts from producer to consumer, it is suggested that designers' tools are more adept at NPD flexibility than those of marketers. However, despite considerable academic attention, few if any studies have examined the shift from a marketing-led approach to NPD to one of greater design leadership in the role of designers. That shift becomes the focus of this research.

3.2   NPD in mature product categories

NPD is focused on how a project is structured, managed, controlled and organised, and it aims to assure applicability of products to business. However, management of NPD is

difficult: it is a complex multifunctional activity, with inherently unpredictable outcomes. NPD is risky, requires much expenditure (Cooper, 1993), and dynamic market and economic conditions render it difficult to replicate. In this respect, it shares many characteristics with the design process. Moultrie et al. (2007) provide a comprehensive review of the literature of reasons for product success and failure.

Processes of NPD differ depending on the type of product category being created (Trott, 2001; Veryzer, 2005). Classifications of product categories have been offered by, for example, Ansoff, 1965; Booz et al., 1982; Hart and Baker, 1999; Johne, 1994; and Trott, 2005. The Booz, Allen and Hamilton (1982) classification proposing six grades of product development – (i) new-to-the-world products, (ii) new product lines (new to the firm), (iii) additions to existing lines, (iv) improvements and revisions to existing products, (v) cost reductions, and (vi) repositioning – is widely accepted in the NPD literature. Just one of the six categories – new-to-the-world products – involves radical innovation. Trott (2001) identifies 'discontinuous' (high-tech, innovative and radical products) and 'continuous' (additions and repositioning of mature products), and notes that only 10% of all products can be considered discontinuous and technologically innovative. Hence, most product development that takes place is not 'new', but falls into continuous, mature classifications.

Discontinuous product development is triggered by the emergence of a new technology, or identification of an under-exploited market segment (Garcia and Calantone, 2002; Trott, 2005). It can be characterised by a sudden leap in intelligence (Kim and Mauborgne, 2005a, 2005b). These new technologies are squeezed into the market in a 'tech push' mode of innovation (Rothwell, 1986). Discontinuous NPD therefore involves much risk: products are new to the firm and the customer, and unique in their attributes (Calantone et al., 2006; Montoya-Weiss and Calantone, 1994; Salavou, 2004). Research has shown that a multidisciplinary approach involving industrial design, R&D scientists, engineers, and marketing research should be used (Veryzer, 1998) when developing discontinuous products.

In contrast, the development of continuous products requires the revision of existing products, or replication of an existing technology (Veryzer, 1998). Unlike the high levels of risk in discontinuous NPD, continuous NPD is the result of incremental progression, and gradual accrual of market research and intelligence. Development of these products is less reliant on frame-breaking technological innovation and scientific know-how, and more so on marketing and design, and the interactions between these disciplines. These products are subject to the 'market pull' innovation approach (Rothwell, 1986). However, how exactly design is involved remains unclear. Thus, this research focuses on the role of design and designers' involvement in NPD in mature, continuous product categories.

3.3 Interface of design and marketing in continuous NPD

It has been suggested that design's (and marketing's) involvement is dependent on type of NPD (Veryzer, 2005). Veryzer's (2005) research into discontinuous, radical NPD found that R&D and engineering have almost exclusive input at the early stages of NPD of highly discontinuous products, and design becomes involved only at a later stage: in the technology push approach, R&D and scientific specialists lead the way. Conversely, marketing and design are of chief importance in continuous new product development.

In the literature, the terms 'design process' and 'NPD process' are sometimes used interchangeably (e.g. Bruce and Daly, 2007; Hart and Service; 1988), and sometimes design is differentiated as a distinct component of NPD (e.g. Gemser and Leenders, 2001; Moultrie et al., 2007; Otto and Wood, 1993; Ulrich and Eppinger, 2008). Traditionally, NPD is the domain of marketing (Hart and Service, 1988), and marketers manage and are involved throughout the process. A lack of agreement in understanding 'design' leads to variation in its inclusion in continuous NPD.

It is difficult to find one best-practice model of product development that fits all types of project, as Cooper concludes (e.g. Cooper et al., 2004a, 2004b, 2004c). Despite numerous representations of the NPD process – sequential models (e.g., Booz et al., 1982), iterative

and parallel processing approaches (e.g. Cooper, 1998; Hart et al., 1999; McCarthy et al., 2006), or 'black box' unfathomable notions (Hart and Baker, 1999) – design is rarely delineated from other functions in NPD frameworks (Veryzer and Borja de Mozota, 2005). For the most part, it is implicit and subsumed into the core activities making up the process.

Veryzer and Borja de Mozota's (2005) comparison of engineering- and marketing-led NPD approaches highlights this point, as shown in Table 3.1. The marketing-led approach typified in Cooper's 'stage gate' process on the left is useful in its emphasis on the multidisciplinary nature of the process, but does not specifically mention the role of industrial design (Cooper, 2001, 2005). Ulrich and Eppinger's representation is more engineering-focused, and does acknowledge design. However, its engineering focus means that design appears only in the mid-process functional development stages.

Recent emphasis on design and its capability as NPD leader suggests it can be considered to play a more important role than stated in the engineering- or marketing-led modes of NPD. In positing a design audit, Moultrie et al. (2007) make valuable distinction between design and management activities in NPD. Their model of NPD (Figure 3.1) represents design as a subset, albeit substantial, of a greater NPD framework. Managerial tasks comprise product generation, project management and other 'goal attainment' activities, while design activities are more functional; for example, requirements capture, concept design and implementation/realisation. Bailetti and Litva (1995) also emphasise the functional nature of design. According to the authors, the design process is 'a series of information-producing cycles carried out by designers to increase the level of detail in the design model to the point where it can be implemented and replicated by non-designers' (Bailetti and Litva, 1995:4).

Table 3.1: Phases of the new product development process

Phase/Gate	Stage-gate (Cooper, 1998)	Design in NPD (Ulrich and Eppinger, 2004)
Phase/Gate 1	Ideation – initial screening	Exploration – consider product platform and architecture – assess new technologies and new needs
Phase/Gate 2	Preliminary investigation – market assessment – technical assessment – business assessment	Concept development – investigate feasibility of product concepts – develop industrial design concepts – build and test experimental prototypes
Phase/Gate 3	Detailed investigation – market research – users' needs and wants studies – values in use studies – competitive analysis – concept testing – detailed technical assessment – manufacturing appraisal – detailed financial analysis (ends with business case)	System level design – generate alternative architectures – define major subsystems and interfaces – define industrial design
Phase/Gate 4	Development – product development (money gate)	Detail design – define part geometry – choose materials – assign tolerances – complete ID documentation
Phase/Gate 5	Testing and validation – in-house product testing – customer tests of products – market test	Testing – reliability test – life testing – performance testing – regulatory approvals – implement design changes
Phase/Gate 6	Market launch – trial production – pre-commercialisation business analysis – production start-up – market launch	Production ramp-up – evaluate early production output

Source: Veryzer and Borja de Mozota (2005:131)

Product development process

Project generation
Idea generation & management | Product strategy
Creative culture & environment | Project selection

Product design process

Requirements capture
Market segmentation | Investigating user needs
Competitive analysis | Ongoing user involvement
| Product specification

Concept design
Concept generation | Ergonomic design
Aesthetic design | Product architecture design
| Concept evaluation & selection

Implementation
Design for manufacture & assembly | Prototyping to reduce technical risks
Prototyping to reduce market risks | Evaluation

Goal attainment
Project objectives
Time to market
Product performance
Product quality
Project spend
Unit cost

Project management
Product development process | Managing design targets & metrics
Risk management | Teamwork
Design reviews | Specialist design involvement

Source: Moultrie et al. (2007:350)

As we can see from the diagram and discussion, the tools and methods of marketing are common and prevalent in NPD management. However, it will now be suggested that the capabilities offered by design run deeper than the functional development of new products.

3.3.1 Two approaches to knowing the customer

It is generally agreed that 'knowing' the customer is essential in product development, and an antecedent to product success (e.g. R.G. Cooper, 1994; Cooper and Kleinschmidt, 1995). As financial and time investment increases during the NPD process, risk also

increases. In response, marketers attempt to reduce risk and uncertainty at each NPD stage by accruing intelligence in a rigorous, scientific way (Hart et al., 1999). In short, the company goal is to minimise failure when commercialised. Market 'listening' has been identified as a crucial tool in achieving the wider goal of market orientation (Johne, 1994), and the marketer is traditionally in charge of uncovering dormant needs lying within the consumer psyche, and formulating new products to meet these needs (Buttle, 1989). Hart et al. (1999) illustrate marketing's centrality in the NPD information accrual process (see Table 3.4 at the end of this chapter). While acknowledging iteration, feedback loops, and the idea that new information can enter the NPD process at any stage, emphasis remains within the organisation, as marketing's collection of customer information is based on the analysis of past data.

Knowing the customer – having a user orientation – is considered a significant input in NPD for creating better design (e.g. Aula et al., 2005; Bailetti and Litva, 1995; Huovila and Seren, 1998; Kumar and Whitney, 2007; Lojacono and Zaccai, 2004; Reinmoeller, 2002a, 2002b; Rosenthal and Capper, 2006; Verganti, 2008; Veryzer and Borja de Mozota, 2005). Design also seeks to accrue information on the customer with the aim of decreasing risk. However, design uses its information to make more appropriate and better products for the customer.

The type of information and collection methods used by design vary from those of marketing (Heylighen, 2008; Rylander, 2008). For Sanders (1992), a range of research techniques can be triangulated to achieve a product that is at once useful (needed), usable (understandable), and desirable (wanted). To achieve this, merely understanding the consumer is not enough. Rather, the voice of the consumer is actively involved throughout the development process. All firms' success rests on meeting changing market needs (Im and Workman, 2004) better than the competition. The frameworks of marketing, with their emphasis on formal periods of research followed by decision gates, are inflexible and ill-suited to this evolving, dynamic approach to product development. Rather, in Sanders's 'converging perspectives' view, research and design become interlocked, and this suggests a role for design in achieving market orientation.

Design is a process of incremental improvement (cf. section 2.2.1), and evidence from practice suggests that the tools of design are especially suited to the development of better products: designers are well placed to iterate and create according to direct observations of the end user. US–UK consultancy IDEO has been extremely successful in developing techniques that allow designers to directly observe, even empathise with, real people in real-life use and experience situations, in order to ascertain needs and develop ideas to meet these needs efficiently (Fulton Suri, 2005). IDEO's general manager Tom Kelley (2006) cites the role of anthropologist as the consultancy's biggest single source of innovation. Several studies also identify ethnography as crucial to discovering latent unresolved needs (e.g. Button, 2000; Junginger, 2007; Kumar and Whitney, 2007; Leonard and Rayport, 1997; Sanders, 2002), and highlight design's responsiveness to customer needs.

Design's focus in acquiring deep understanding of the needs of the end-users ('user-oriented design', Veryzer and Borja de Mozota, 2005) renders it well equipped to lead the initial stages of NPD (Ainamo, 2007). The tools and approaches of design therefore have particular impetus in the idea generation stage of NPD. Indeed, designers' contribution to innovation has received substantial examination in the NPD literature (e.g. Borja de Mozota, 2003; Brown, 2009; Kelley, 1999; Kim and Mauborgne, 2005a; Leonard and Rayport, 1997; Marxt and Hacklin, 2005; Reinmoeller, 2002b; Trott; 2001; 2005; Verganti, 2003; 2008; and Veryzer, 1998).

However, the informal style of intelligence gathered by designers is often not considered 'credible' by managers (Martin, 2009a). Martin (2009a) sets up the dichotomy between the analysis of past data and the synthesis of future data. While design research is open to interpretation, marketing intelligence is more quantifiable. In companies that include design to a limited extent, designers' ideas are likely to be vetoed in the boardroom due to a lack of quantified grounding. While the 'official' intelligence (i.e. that endorsed by management) on customer requirements is closely scrutinised by management, the information gathered, analysed and disseminated locally by the designers is not (Bailetti

and Litva, 1995). It is suggested that this leads to tension, and inflames the design–business conflict. Indeed, Svengren Holm and Johansson (2005) identify an acute disconnect when design is managed by marketing, especially when design is viewed as a subset of marketing's activities, and is managed by marketing. This disconnect is harmful to NPD. For example, in Bailetti and Litva's study of the integration of customer requirements in new products, the authors suggest that information is often incorrect due to having been derived from multiple, inconsistent data sources. As a result, designers, in having to validate their ideas, must weld marketing intelligence to their own sources. Moreover, miscommunication and misunderstanding in design and marketing information exchange are cited as key stumbling blocks in product success (Mello, 2001; Svengren Holm and Johansson, 2005). To overcome this problem, Hart and Service (1988) call for integration between design and marketing. In their view, an effective NPD process combines 'both marketing and design skills (in terms of researching and responding to customer needs) and manufacturing skills (in terms of manufacturing capacity and capabilities)' (Hart and Service, 1988:218). The design–marketing relationship is therefore an important interface within the organisation (R. Cooper, 1994; Cooper and Jones, 1995). The key ideas in researching the customer are summarised in Table 3.2.

Table 3.2: Key propositions in customer research

Concept	Description	Author(s)
Voice of customer paramount	Knowing the customer reduces risk, enhances product success, and creates better products	R.G. Cooper (1994, 1995, 2001); Cooper and Kleinschmidt (1995); Hart et al. (1999); Hill, 1988; Im and Workman (2004)
Market orientation creates better products	Gathering, disseminating and using market intelligence through use of frameworks and systems increases organisational performance and profitability	Jaworski and Kohli (1993); Kohli and Jaworski (1990); Narver and Slater (1990)
Market listening enables market orientation	Undertaking research on the market uncovers latent customer needs	Johne (1994); Rothwell (1986)
Marketing core to market orientation	The frameworks and tools of marketing used in market research	Buttle (1998)
Interpretation of intelligence rather than being driven by customers	Interpretation enables long-term success. Lead user analysis can assist.	Foxall (1988); Johne (1994); Urban and von Hippel (1988); von Hippel (1978, 1986)
'Customer is king'	Paradigm shift: power moves from producer to consumer – products must be superior to satisfy a discerning consumer. Customer should be at the heart of research	Kumar and Whitney (2007); Martin (2007a, 2007b, 2009a)
Marketing and design unison essential	Convergence of systematic marketing and intuitive design sources of data	Hart and Service (1988); Sanders (1992)
Design and marketing's methods divergent	Approaches and tools of design and marketing are different and subjective	Svengren Holm and Johansson, 2005
'Knowing' the customer allows better design	Design research techniques allows the uncovering existing product faults. Gives better understanding of what actually is the problem. Problems and solutions co-evolve.	Bailetti and Litva (1995); Huovila and Seren (1998); Kumar and Whitney (2007); Lojacano and Zaccai (2004); Rosenthal and Capper (2006); Verganti (2008); Veryzer and Borja de Mozota (2005)

Source: the researcher

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2 'Lead user' analysis posits that customers with more advanced needs are more useful, and should be targeted for research

3.4   Design NPD leadership

While traditional marketing-led NPD approaches stress marketing's importance in reducing risk and uncertainty, and concede design to exist only on a functional level in the development of new products, emergent evidence from the literature suggests that design as a driver of NPD is bringing it to a position of greater gravitas.

More recently, as the result of the shift in power from the producer to the consumer, it is the customer that is driving the demand for new products. Effectively, the firm's knowledge of the customer's desires and cultural trends is essential to create products relevant for the market. In section 2.5, it was reported that design and marketing have similar goals, but utilise different tools and approaches to achieve their objectives. It was also proposed that designers' wide extrinsic spheres of influence are helpful in charting, understanding and 'feeling' cultural shifts taking place. In this regard, the rigid tools of marketing are often preventative in forecasting, isolating and deciphering changes.

In light of these changes, design emerges as important in tackling changing market conditions. For example, Valtonen (2005) identifies an evolution in the role of the (product) designer, in decade-long increments over the past 60 years in her native Finland (Figure 3.2). Particularly in the past two decades, Valtonen suggests that design has evolved from a strategic place in creating brand experience in the 1990s to being a driver of innovation in the 2000s. In this view, the integrated design ideology goes hand in hand with the idea of innovation – looking at things with a creative mind and finding new solutions – and is aligned to the ideas of design thinking. While Finland and other Nordic countries have always had a strong design policy, it resonates that 'innovation' and 'creativity', and indeed design, were key words in the New Labour economic policies of early 2000s Britain.

| 1950s Promoting the nation | 1960s Involving industry | 1970s Rise of ergonomics | 1980s Design management | 1990s Brand building | 2000s Innovation & competitiveness |

Aesthetics and styling → Entire NPD process → Product definition → Product roadmaps → Strategy → Vision
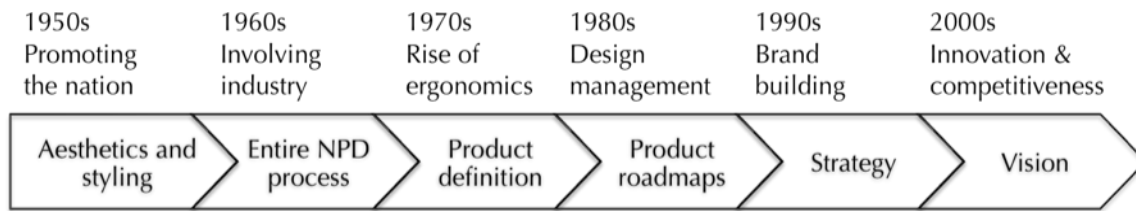
Source: adapted from Valtonen (2005)

Verganti (2008) also suggests that design can have extensive, significant and decisive involvement in NPD. In his research of Italian 'design-intensive' manufacturing organisations (i.e. those that integrate design at the heart of the firm), he uncovers patterns by which these companies use design to master radically new product 'meanings', 'which explore new routes, satisfy latent desires and aspirations, move the frontier of design languages, set new standards of interpretation, and eventually strengthen the brand value' (Verganti, 2008:442). This is achieved not by looking to the market, but by the nurturing of a multidisciplinary community, which allows deep understanding of societal, cultural and technological developments. This he terms 'design-driven innovation'. Similar to Rothwell's (1986) coupling model, Verganti emphasises the interactions in a broad design network as crucial to driving product development. Design-driven innovation therefore requires careful management of this web of partners.

Perks et al. (2005) also track design's chronological development and suggest how design was involved in business and NPD efforts during historical periods, summarised in Figure 3.3. The authors posit that design, in the early 2000s, is taking on a role of greater prominence, importance and gravitas as NPD process leader.

Figure 3.3: Evolution of the role of design in NPD
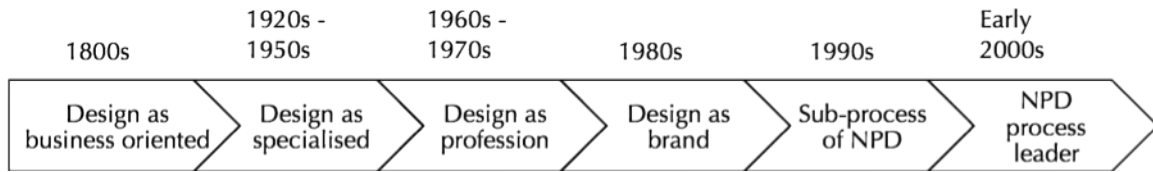
Source: adapted from Perks et al. (2005)

Perks et al.'s (2005) study is convincing in its argument that design is gravitating to a position of NPD process leadership. In their study of 18 organisations that used internal design, external design, or a mix of the two approaches, the authors identify three main roles for design in NPD. The authors' evidence pertains to design 'actions', that is the '"behaviours imbued with meaning" … drawn from the context of an individual's education, training and ongoing work experience. Actions may be carried out inside or outside of the boundaries of an individual's normal work practices or specification' (Perks et al., 2005:115). The authors' taxonomy encompasses three roles. First, in 'design as a functional specialism', designers concentrate on functional design tasks, and receive and respond to a specific brief. Second, in 'design as part of a multifunctional team', NPD is undertaken in a team approach. Design is recognised as a key player in this team, and the role of the designer is dominated by communication and interfacing activities. Third, in 'design as NPD process leader', design is a major force in innovation. Designers are involved, and moreover drive, all stages of the NPD. In this role, designers interact directly with the market to influence strategy, segmentation and suggest new markets. A summary of the skills and actions associated within each of these taxonomies at each NPD phase is shown in Table 3.3.

Table 3.3: Synthesis of design actions and associated skills within each action category and in each NPD phase

NPD phases	Action categories					
	1. Design functional		**2. Integration**		**3. Process leadership**	
	Actions	Skills	Actions	Skills	Actions	Skills
Identification of the need	Customer contact, technology exploration, idea and theme generation	Creativity, interpretation	Interaction with other functions (e.g. manufacturing, marketing)		Team assembly, market observation and research, market segmentation, business case development	Business and market analysis, interpretation research
Concept generation	Receiving brief, design research (e.g. shopping visits, colour and technology research), design decision-making (e.g. design theme and mood board)	Observation, visualisation, data analysis, creativity, visual literacy, aesthetic judgement	Interaction with other internal functions (e.g. manufacturing, marketing), interaction with external stakeholders (e.g. suppliers)	Relationship management, diplomacy, communication, personal promotion	Market and technical research, informing the team, trade show visits	Business analysis, motivating others, relationship management, communication, project management
Design and development	Designing prototype packaging and launch material	Sketching, drawing, model-making, design and ergonomic analysis, multidisciplinary thinking, creativity, critical analysis and selection	Detailed negotiation and liaison with internal (e.g. sales and technical staff) and external functions (suppliers)	Relationship management, negotiation, project management, communication	Observation of response to design, customer response, measurement, consider business costs, visit to manufacturers and suppliers, leading the team and stakeholders	Data and business analysis, interpretation, leadership
Production	Transferring designs to production	Design for manufacture	Organise tooling, liaison with manufacturing and suppliers	Technical analysis negotiation	Monitoring production quality, dealing with manufacturing problems	Persuasion, motivating others, project management
Launch	Designing launch material	Visualisation			Plan and review launch (e.g. manage public relations and marketing)	Business analysis, planning, motivating others, persuasion

Source: Perks et al., 2005:118

While design was found to make valuable contribution at every stage of the NPD process and in each role category, Perks et al. (2005) found that in those cases where design was process leader, the remit of design amalgamated strategic marketing and more traditional design activities. Designers actively managed the entire development process, and their skill set devolved into interpersonal, motivation, persuasion, business management and project management skills.

From Perks et al.'s research, it is suggested that design and designer importance have endured periods of particular strength. As has been suggested in this discussion, design at present is in a new period of ascendancy as it grapples with a more evolved role of greater strategic importance in NPD, requiring more extensive integration in the organisation.

3.5   Mapping the variation in design NPD involvement

In this literature review, (1) NPD type (Veryzer, 2005; Veryzer and Borja de Mozota, 2005) and (2) firm strategy (Danish Design Centre, 2003; Gemser and Leenders, 2001; Moll et al., 2007; Verganti, 2008) are both suggested to be determinants of how design is integrated in NPD.

First, where NPD results in products that are highly discontinuous, design is involved later and less intensively in a process led by R&D and engineering. By contrast, in continuous style NPD, design has a more prominent role in determining product success. Second, in firms whose strategies devalue design, design is an add-on to an NPD process led by marketing (Bailetti and Litva, 1995; Mello, 2001). In contrast, for firms who hold design in high esteem and integrate it tightly into corporate policy, design plays a role from the outset. Developing these ideas, the review of the literature allows the construction of the matrix in Figure 3.4. Each quadrant shows a different style of design's involvement in NPD.

Figure 3.4: Design NPD involvement
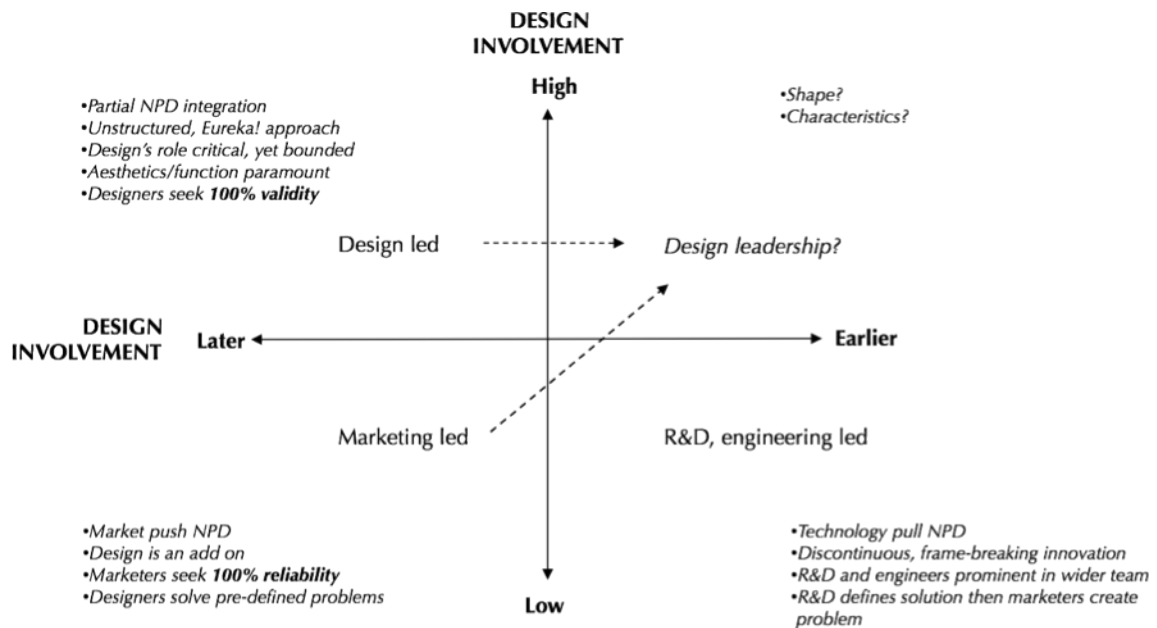
Source: the researcher

The four quadrants are explained as follows. First, the R&D/engineering-led mode of NPD has its focus in discontinuous, frame-breaking innovation. While design is consulted, its involvement is secondary to those primary functions. Second, the marketing-led mode denotes an equally low design involvement. Design is consulted later in a process led by marketers. Third, being design-led implies a critical yet bounded inclusion of design in NPD. In this approach, designers embrace the aesthetic and functional in an unstructured approach to NPD. These latter two modes are described in greater depth in Table 2.8.

However, the discussion so far hints at an emergent mode of NPD, also dealing with incremental product development. In this mode, designers are becoming more important. In Figure 3.4, the fourth quadrant is tentatively termed 'design leadership'. However, the composition and shape of design leadership remains vague. Riedel et al. (2008) discuss design leadership as at once a business function, a way of thinking and a means of communicating. Moll et al.'s (2007:862) idea of design orientation is similar, defined as when firms 'see design as a competitive advantage and incorporate their

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design processes into their business strategy'. These studies and others agree that design requires tight integration into organisational policy if it is to be used to its greatest potential. To that end, Martin's (2009a) proposition that design thinking is the organisation's ability to integrate analysis and intuition, and for managers to embrace the tools of design, is useful in suggesting a way forward.

However, design thinking does not explain the other proposition that design and designers themselves are taking on a greater leadership role (e.g. Perks et al., 2005; Valtonen, 2005; Verganti, 2008). There is shortcoming as to how design and designers are actually involved in a design leadership mode of NPD. Greater development and understanding is required as to the practical implications of this shift. This thesis therefore seeks to further contextualise the emergent theories of design leadership from the point of view of the designers.

3.6   Conclusion

Marketing and design have the most profound impact in the development of continuous styles of new product development. However, neither the design-led nor the marketing-led mode of NPD alone is adequate for the conditions of the 21st century market environment, nor to the requirements of the marketing manager or the designer. While there is emphasis on design integration across the organisation, recent evidence from the literature reports a rise in design NPD leadership. The present research has its goal in charting the move from the marketing-led, and design-led, modes of NPD to design leadership, illustrated in Figure 3.4. It seeks to comprehend the shape of design leadership in continuous product categories, especially the impact of this shift on designers.

Table 3.4: Information needs, source and output in the NPD process

Stage of development	Information needed for stage; nature of information	Sources of information	Likely output of stage in light of information
1. Explicit statement of new product strategy, budget allocation	Preliminary market and technical analysis; company objectives	Generated as part of continuous MIS and corporate planning	Generated as part of continuous MIS and corporate planning
2. Idea generation (or gathering)	Customer needs and technical developments in previously identified markets	Inside company: salesmen, technical functions Outside company: customers, competitors, inventors	Body of initially acceptable ideas
3. Screening ideas: finding those with most potential	Assessment of whether there is a market for this type of product, and if the company can make it Assessment of financial implications Knowledge of company goals and assessment of fit	Main internal functions: R&D, sales, marketing, finance, production	Ideas which are acceptable for further development
4. Concept development: turning an idea into a recognisable product concept, with attributed and market position identified	Explicit assessment of customer needs to appraise market potential Explicit assessment of technical requirements	Initial research with customer(s) Input from marketing and technical functions	Identification of: key attributes that need to be incorporated in the product, major technical costs, target markets and potential
5. Business analysis: full analysis in terms of its business potential	Fullest information thus far: detailed market analysis – explicit technical feasibility – and cost-production implications – corporate objective	Main internal functions Customers	Major go/no go decision Development plan and budget specification
6. Product development: crystallising the product into semi-finalised shape	Customer research with product. Production information to check 'makeability'	Customers; production	Explicit marketing plan
7. Test marketing: small-scale tests with customers	Profile of new product performance in light of competition, promotion and marketing mix variables	Market research; production, sales, marketing technical people	Final go/no for launch Incremental changes to test launch
8. Commercialisation	Test market results and report	As for test	Full-scale launch

Source: Hart et al., 1999:23

4 chapter four: **design integration and the designer–client interface**

4.1 Introduction

This chapter examines the 'make or buy' decision in design. When it comes to the role of design in NPD, design activity can be carried out in-house, it can be outsourced, or a combination of the two (Bruce and Morris, 1995; von Stamm, 1998). This decision is key in determining how the product development process is managed, and hinges on a number of issues. Consultancy design is considered to be a rich context in which to examine the marketing–design interface. The operations of design consultancy are examined in detail, especially interfaces encountered with client firms. Designer–client relations are found to be of paramount importance in determining progression of the NPD project. Finally, the research question of this thesis is summarised.

4.2 Organising for design

The make or buy decision is a classic dilemma in the strategic management of organisations. De Wit and Meyer (2010a) label the two types of approach *discrete* and *embedded*. The discrete perspective views companies as independent, keeping all capabilities in-house (Porter, 1985), and in fierce competition with all other firms. In contrast, in the embedded approach, collaboration with other firms can bring benefits to all parties (Fill and Visser, 2000; Hamel et al., 1989; Lorenzoni and Baden-Fuller, 1995), for example enhancing corporate strengths and competencies. Table 4.1 compares the ideas associated with both sides of the make or buy dilemma. The advantages and drawbacks of the two approaches can be explored in greater depth in Bettis et al. (1992) and Quinn and Hilmer (1994).

<u>Table 4.1: The 'make or buy' dilemma</u>

Make	Buy
Firms carry out activities in-house	Firms outsource non-core activities as much as possible
Firms are islands	Firms create partnerships with others
Competencies are only internal	Competencies can be derived externally
Investment is direct	Investment is indirect
Organisations are discrete	Organisations are embedded in a larger network
Emphasis is on competition	Collaboration is the prevailing force

Source: the researcher

In developing new products, the decision of whether or not to outsource and embrace a partner firm is crucial since much financial expenditure, and human skill and knowledge, is essential in the process. The dilemma therefore applies equally to design as to products or other services.

The comparative arguments for in-house and outsourced (consultancy) design expertise have been examined and developed in the design management literature (Bruce and Jevnaker, 1998; Bruce and Morris, 1995, 1998a; Jevnaker and Bruce, 1998). This choice is considered important, as the integration of design affects the approach and management of the resource in the NPD process (Petersen et al., 2005). Bruce et al. (1995) posit that the adequacy of management of the resource is crucial to design outcomes. However, the path of best practice remains ambiguous. The choice and outcome are unique in each situation and determined by company, industry and product objectives.

The decision can relate to a multitude of company-specific factors (von Stamm, 1998). These can be subjective, for example top managerial or CEO attitudes and opinions (Hart and Service, 1988) which determine how design is perceived in the organisation as a whole, and how it is integrated into the firm, as well as its management and success. Equally, company resources, capabilities, and financial forecasts also influence the choice (Walsh et al., 1992). Von Stamm (1998) also identifies the importance of design for the company's competitive positioning, the frequency of

product development, company size, type of product development and market segment as influential on design sourcing decisions. Company strategy is therefore key to determining whether to invest in an internal design function, or whether to outsource.

4.2.1 In-house design

The building of an internal, in-house design capability can be costly. Therefore, companies that have internal design normally have policies that champion and value design contribution. Top management in particular are supportive and recognise design. Designers working in in-house design teams are employees of the organisation, and so it can be argued that their knowledge of, and bonding with, the company's brand and values is strong. Goals of the designers are shared with the organisation at large. That these designers are company employees can be valuable for the project's development. Liaison with other departments is easier. Designers are proximate to counterparts in other functions, both physically and in cultural familiarity. This moreover facilitates information transfer. When goals are shared, there is no reason to withhold information across the organisation, and so designers can be fully informed of all details required to create a design solution.

There are, however, disadvantages to the in-house route. The company's business and its products' lifecycles may not merit the permanent employment of full-time designers, and so the team may be small or under-equipped. In his research on product success factors, Cooper (1993) suggests that reliance on under-equipped in-house resources prevents the production of top-quality 'winner' products. That designers in in-house teams are employees can also be disadvantageous in other ways. The designers who work always in an organisation are experts in that company's industry; however, this can create a situation where there is little incentive to innovate outside of the immediate scope of product development. Teams can be weak and suffer from stagnation (Bruce and Morris, 1998a). Similarly, specialised design teams can be staid as they are regular full-time employees, and there is not the same dynamism for innovation as in consultancy design where pitching for new projects is necessary.

Finally, in-house design can suffer from being an arm of the company hierarchy. Internal design often exists attached to other departments, usually R&D, marketing or engineering teams (Veryzer and Borja de Mozota, 2005; Walsh et al., 1992). Where many disciplines have input, NPD can become complex and problematic, and bureaucracy and cultural hierarchies can influence whose input is most decisive in the NPD process. In the worst cases, non-design professionals can be drafted in who do not recognise the design dimensions of their role (Gorb and Dumas, 1987).

4.2.2 Consultancy design

Outsourcing tasks to firms with specialist expertise is often used to develop competencies in organisations. These types of collaboration can range from equity joint ventures and franchising, which is particularly commonly employed in international contexts (Preece, 1995), to the use of consultancy and technical training to gain advice and experience. The decision to enter into a partnership hinges on a series of trade-offs for the organisation; for example, contracting costs versus high capital investment, operational coordination and control versus flexibility, and stagnant versus dynamic knowledge input.

In design, the use of an external consultancy is the most common approach (Jevnaker and Bruce, 1998; Press and Cooper, 2003) in all the design sub-fields. Recent research by the UK Design Council (2010a) charts the composition of the design industry in the UK, noting that consultancies outnumber in-house design: there are 10,800 consultancies against 6,500 in-house departments.[3] Moreover, 60% of all UK designers work in consultancies.

For the client firm, there is a range of benefits to hiring consultancy design, for example (1) improvement in the firm's external image and credibility, (2) enhancing the skills of

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3 Figures sourced from the Design Council's 'Design Industry Research 2010' executive summary. Available online at:
http://www.designcouncil.org.uk/Documents/Documents/Publications/Research/DesignIndustryResearch20 10/DesignIndustryResearch2010_FactSheets_Design_Council.pdf

the in-house team, and (3) changes in the management of NPD (Bruce et al., 1995). It is less costly to use an external resource; however, this also means that the use of consultancy can occur where a lack of belief is preventing direct investment in design (Walsh et al., 1992). However, while in-house design suggests that these companies value design to a greater extent than those that use consultancy design, research finds that this is not necessarily a determinant of design success. Walsh et al. (1992) suggest that companies that invest indirectly in the use of a consultant can also be considered to prioritise design.

The outsourced approach is generally considered to be more dynamic than the in-house route. Consultants external to the firm have the ability to input fresh ideas continually (Bruce and Morris, 1998a; Lorenz, 1990; Walsh et al., 1992). Consultant design in general has associations of being vibrant, fast-paced and rapidly evolving as consultancy studios continually have to pitch for new work, and therefore must constantly invent fresh ideas to survive. In the pitching scenario, the interface between designers and marketers is of particular importance.

However, the literature also advises caution as to the constellation of the designer–client partnership. Filippetti (2010) terms the relationship the 'essential tension'. The findings of von Stamm's (1998) case study of the development of a motorcycle using outsourced design expertise found a disconnect between design consultancy and client. In this study, a lack of integration between internal functions and the consultant designers, combined with too great a trust in the designer, resulted in a design that was impossible to manufacture. Therefore, specific management of, and attention to, the designer–client relationship is required.

There are other problems related to the transfer of information and communication between the client and designer when design exists out of house. For example, Norman (2002, 2004) suggests that many designs fail because of the pursuit to please the wrong people. When the design leaves the studio for manufacture, it is invariably changed by marketing or manufacturing, being gradually altered to meet the needs of the wrong people (Norman, 2002:158). In this view, meanings of the 'client' can be ambiguous, and designers often must consider the immediate client, other parties within the client organisation, as well as the end-user.

Due to these points of contention, it follows that those managing the interface require special training in order that communication is clear and both sides understand project objectives (Lewis and Bonollo, 2002; Svengren Holm and Johansson, 2005). Client firms can be secretive about strategic decisions in order that intelligence is not leaked to rivals before product launch. The information received by designers is therefore incomplete and insufficient to the demands of designing. Since consultancies are indirect, horizontal partners to client organisations, secrecy should not be an issue, unless the consultant partner has another client which is a direct competitor.

Table 4.2, developed from von Stamm's (1998) research and allied to the literature presented in this section, compares and summarises the arguments for in-house and consultancy design.

Table 4.2: Comparing in-house and external design

	Advantages	Disadvantages
In-house	• Cost-effective • Accessible • Easier to coordinate with other in-house departments • Retention of internal control • Designer develops understanding of company • Goals and values of designers and business people are shared	• Stagnation – limited in scope for innovation/new ideas • Lack of specialised expertise • Lack of need for permanent design division • Internally focused – loses touch with external developments
External	• Lack of (internal) creativity/new ideas • Access to specialist expertise • Relieves work load • Additional staff/skills accessible • Ability to change and explore other options	• Lack of understanding of company issues • Problems of ready accessibility • Difficulties in coordinating with internal departments • Confidentiality/privacy issues • Lack of internal vision in assessing the design work • 'Not-invented-here' syndrome • Problems with manufacturing externally designed products • Loss of control • Credibility gap (if design fails to match company 'style')

Source: developed from von Stamm (1998:44) and other literature

In the context of this research, analysis of external consultancy design offers the potential to isolate the dynamic richness of interplay between the design and marketing functions. The rapidly evolving nature of consultancy design, which is the most common approach in NPD, especially in mature product categories, allows examination of a range of different clients and projects. Therefore, it was concluded to be the most appropriate context in which to examine evolving notions of design leadership.

4.3   Design consultancies

While architects do a RIBA (Royal Institute of British Architects) examination to symbolise a standard of professional excellence, there is no body or specific qualification that enables one to practise as a product designer. The composition of the industry is therefore diverse, and this is reflected in consultancy ownership. Bruce and Morris (1998b) conducted a comparative study of design professionals in the UK and Scandinavia. Significantly, they found that graduates with practical qualifications are more likely to found their own consultancies. The majority of consultancy partners in UK design firms originated from art schools; the remainder were from backgrounds in economics and business studies, but this was relatively uncommon. By contrast, a quarter of Swedish consultancies were founded by engineers. Falay et al. (2007) suggest that design entrepreneurs are more likely to have a background that emphasises the artistic rather than marketing competencies. While no recent statistical evidence charts the backgrounds of design consultancy owners, the Design Council[4] suggests that a learning-by-doing policy is common in the running of design consultancies, and that these grow and develop largely through experience:

> Very few owners and managers of design consultancies have undertaken any substantial training in management and leadership. Like many other aspects of the way design businesses emerge and grow, designers trade first and foremost on their creative skills, picking up techniques in how to run a business along the way.

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[4] Accessed on 13 December 2010 at:
http://www.designcouncil.org.uk/resources-and-events/Designers/Leadership-and-management-training/

Since management experience in consultancy founders is lacking, the Design Council is active in assisting designers with the business practicalities of running their consultancies. For example, it promotes training and workshops, it has compiled management and legal guides available free of charge to designers, and it fosters strong collaborative networks comprising consultancies (both small and large), education institutions and independent bodies.

The lack of clear skills, expertise and qualifications, especially in management, means that design consultancies can vary drastically, and they can often be dependent on the style and background of the senior partners. Bruce and Morris's (1998b) research on design professionals offers other important insights on the nature of design firms. They identify two strategic archetypes of well-run and poorly run design organisations in which a proactive, 'dynamic' approach is contrasted with a reactive, 'stuck in a rut' approach (Table 4.3). While their comparative study of Scandinavian and UK firms found examples of both in all countries studied, overall more 'dynamic' firms were found in the UK.

Consultancies considered to have an effective strategic practice were proactive in business development, in understanding and developing relationships with new and existing clients, and had a long-term strategic perspective. In contrast, design firms that were considered stuck in a rut were reactive to environmental pressures, concentrated on functional design work, and had an attitude of dependency on an authoritative client. Management of the design consultancy therefore emerges as vital to how it approaches the design process, client and business development, and thereby to the final design outcomes.

Dynamic (Effective strategic practice)	Stuck in a rut (Less effective strategic practice)
Build up a balanced portfolio of longer-term and shorter-term client relationships.	Over-dependency on large client accounts. This may aid turnover growth but is not necessarily profitable.
Identifying new market opportunities, preferably in expanding and robust markets.	'We know what market we are in.'
Knowing what adds value to your existing and potential clients' business development.	'The client will brief us.'
Developing skills in new business development.	Designers chase up business when they can. Ad hoc and irregular approach to new business development.
Being aware of major factors affecting your market environment and that of your clients.	'We sell good design.'
Having longer-term perspective, being visionary and prepared to be flexible and to work in newer, expanding markets.	Short-termism and meeting the needs of current clients only.
Focusing on the companies' core strengths and continually developing these. Protecting creativity in larger companies by devising a structure that permits creativity for designers at all levels.	Too many/confused design and management offerings. What is your main business? Too large and controlling. Creativity is stifled.
Investing in state-of-the-art technology and continually developing the competency to exploit this fully.	Reactive to technological trends in the design process.

Source: Bruce and Morris, 1998b:280

4.3.1 Types of designer–client partnerships

The design management literature acknowledges that consultancy design can often offer a more dynamic and fresh input than in-house teams. However, there are problems associated with its use, and these centre on how well the design capability interfaces with, and manages, its client. Integrating external resource with internal can be difficult, especially when design is integrated into a business context, where the cultural gulf is already wide.

The sourcing of suitable and compatible external design expertise is therefore crucial to product development success. Within the use of external, consultancy design, there are

variations in precisely how 'external' the partner is to the client firm. Expanding on Bruce and Morris's (1995) coda of approaches to design organisation, the review of the literature, along with current trends, reveals five strategies of discrete design capability. This taxonomy is described in order of the least to greatest investment on the part of the client firm.

1) Branding of existing, generic products

The branding of pre-made, generic products requires the least involvement and investment that the client can possibly have in design, and the client has no input in their design or production. French electrical homewares manufacturer Terraillon is an example of a firm that has used this strategy in the past. This type of design occurs when there is little management buy-in or belief in design. While product development is an important component of the business's activities, design is often viewed as a superfluous, whimsical investment. These businesses exist at the most marketing-led end of the design–marketing spectrum. Products produced often at low costs in Asian manufacturing plants are bought and branded. Hence there is little linkage between the firm's product strategy and the products it sells. The brand remains weak and competition is often on a price-only basis.

2) Use of external design consultancy (one consultant partner, or several)

The use of external design can take many forms and can last one project or several (Bruce and Docherty, 1993). Client firms recruit a design consultancy to work with marketing to carry out projects. American Smartphone manufacturer Palm and computer peripherals manufacturer Logitech are examples of firms that use external design. Two approaches to consultancy deployment have been identified: (1) the recruitment of a single consultancy as a partner firm to carry out the bulk of projects, and (2) the drawing of specialist expertise from a pool of partners, depending on project needs. This is dependent on type and frequency of NPD. Some consultancies may be recruited towards the beginning of the project for strategy and idea generation

consultancy, while others may be more specialised in the back-end tasks of design and manufacture.

While design is recognised by these firms, depending on the route taken, clients can be proactive or reactive in their approach to design integration. Hiring a consultancy to carry out design work according to a specific brief, for example, is a more reactive or cautious approach than one that recruits design expertise to work closely with marketing at the beginning of the project to conceive the idea.

3) Combining outsourced consultancy with in-house design employees

The firm straddles the tension between external and internal resources by investing in both in-house and outsourced design; for example, at South Korean consumer electronics firm LG. It has a permanent in-house team which is bolstered by the use of one or several external designers, chosen from a pool of partner consultancies. These extra resources can be deployed for purely functional reasons, or for strategic advantage, for example when increased workload requires extra design resources, or when fresh input is needed to reinvigorate a staid or stalled project.

4) Hiring of a 'signature' designer

The signature designer is a design 'celebrity' or 'superstar' (e.g. Marc Newman, Philippe Starck, Michael Graves) who works freelance or for an independent wholly owned consultancy. He or she is hired by the client firm, and is normally supported by an in-house team (e.g. Alessi, adidas, Target) or a consultant partner. Presumably an association of agents and assistants facilitates relations between the signature designer and executives in the client firm.

The shift in power from producer to consumer is an antecedent to this trend. As consumers become co-creators of products, and as design moves into mass-market availability, a design value becomes expected. This approach is particularly associated with high-street fashion brands, but is extending to other manufacturing firms.

A key success factor in mass fashion brands is the promotion of product exclusivity, especially when normally high-end names become available to the masses. H&M, for example, creates one-off capsule collections on average twice per year by a named high-end fashion designer, including for example Jimmy Choo, Sonia Rykiel and Karl Lagerfeld. Numbers are limited, which also enhances desirability of these products. Several high street fashion brands have followed suit in this democratisation of design; however, some associate themselves with celebrities rather than celebrity designers (e.g. Topshop and Kate Moss, Mango and Penelope Cruz).

While the fickle and fast-moving nature of fashion design lends itself particularly well to this one-off approach, other manufacturing firms associate themselves on a more long-term basis with a signature designer. Alessi operates on a pitch-for-product basis (Alessi, 1998). While it has a pool of long-term collaborators (for example Michael Graves, Philippe Starck, Enzo Mari), it also encourages potential collaborations with new freelance designers by facilitating communication using a pitching process. Indeed, some collaborations have been short-lived: Ron Arad, Frank Gehry, Michael Graves and Marco Zanuso, for example, have all produced a single product for the company. Perhaps these shorter-term relations indicate the one-off nature of ideas by these designers, who are commercially successful in their own right and often in other disciplines of design.

IKEA's approach of naming its designers is reflective of this trend and indicates an increasing desirability and visibility for design. While IKEA's designers are relatively unknown, that their names appear on the products with which they are associated illustrates an emerging ubiquity of design.

5) Design alliance: an off-site, wholly owned subsidiary

Great amounts of capital and resources are often invested in these wholly owned design subsidiaries, and these are of central importance in the corporate structure. Kenwood and BMW, for example, have independent design subsidiaries. Despite design being located off-site, it is an integral component of the firm. This is one example where external design benefits can be as close and fluid to the client as an in-

house team. BMW, for example, owns DesignworksUSA. The latter must pitch for BMW work, but it also works with a range of other external clients since pitching is competitive. Privacy concerns are much reduced in these situations since designers are quasi-internal.

The acquisition of a design consultancy can be a strategic move. Frog design, IDEO and DesignworksUSA, for example, were all acquired by manufacturing firms (Flextronics, Steelcase and BMW respectively) during the 1990s. These acquisitions enabled more business for the manufacturing firms, but also hinted at the then fledgling success and influence of these consultancies. While frog and DesignworksUSA are still owned by those manufacturing firms, IDEO is currently in a management buy-back programme.

Figure 4.1 summarises these five approaches on two key variables: (1) how involved the client is with the workings of the design partner, and (2) the extent to which the client invests (financially and otherwise) in the design partner.

Figure 4.1: Types of designer–client interface
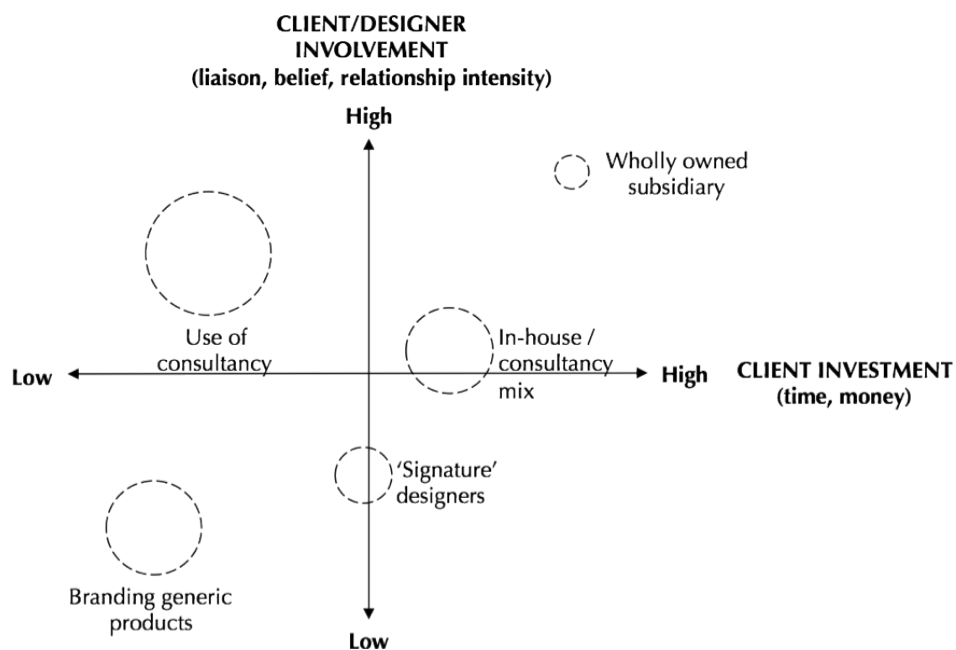
Source: the researcher

4.4 Designer–client relationships

The decision to 'buy' can blur the boundaries between the firm and its environment (Mintzberg, 1979). Firms using design and innovation consultancy firms to produce new products are especially exposed to a set of strategic tensions relating to bureaucracy versus autonomy, risk-taking versus safety, and reactive evolutionary strategies versus proactive revolutionary strategies (de Wit and Meyer, 2010a). The management of relationships between the collaborators is therefore crucial in the successful workings of the partnership (Lorenzoni and Baden-Fuller, 1995).

The management of relationships has become an area of immense interest in the marketing management literature (Grönroos, 1994, 2004; Gummesson, 2008). Design is a personal service characterised by its reliance on interpersonal factors. Relationships are paramount to successful product development, and timeliness to market. Von Stamm's (1998) research of an ailing motorbike manufacturing organisation in Eastern Europe examined the structure of the relationship between the industrial design consultancy and the client. She suggests that the grounding of the relationship is a key contributor to the designer's ability to respond directly to clients' needs. Other studies have also identified the designer–client relationship as central to the management of the external design team (Bruce and Docherty, 1993; Bruce and Morris, 1998a; Haltsonen and Salmi, 2009). The Design Council's (2010a) research on 'winning' work, for example, found that 72% of surveyed UK consultancies rated the relationship with the client as 'very important' when targeting new clients. These relationships – often based on interpersonal factors – are unique, and significantly, they are grounded in 'chemistry' (Bruce and Docherty, 1993).

Evidence from the literature suggests a spectrum of types of consultancy–client exchanges. Bruce and Docherty (1993), in their study of UK and Scandinavian design consultants, found three types of client–designer relationships based on duration and proximity variables. The relationship between client and consultancy: (1) can be a 'one-off purchase', never to be repeated, (2) can be more distant but still unfolding over several collaborations in an 'arm's-length' approach, or (3) is enduring and close in a 'family' approach. In the family approach, the relationship has longevity, and the

consultancy almost achieves in-house status. In contrast, one-off purchase situations keep the designers separated and, the authors argue, produce less successful design results.

Bruce and Docherty (1993) suggest a correlation between the length of partnership (i.e. the type of exchange) and a number of other factors that mediate appropriateness of the design solution. As relationships develop over time, the authors found that: (1) levels of trust in the designer increase; (2) the knowledge that the client imparts to the designer increases; and (3) the designer's experience of the client accrues. The authors suggest that these are founded on personal chemistry. These conditions allow the creation of more appropriate design solutions. Hence, this research shows that the better the relationship, the more appropriate is the design solution. Figure 4.2 provides a visual summary of Bruce and Docherty's (1993) propositions.

Figure 4.2: Classification of designer–client relationships
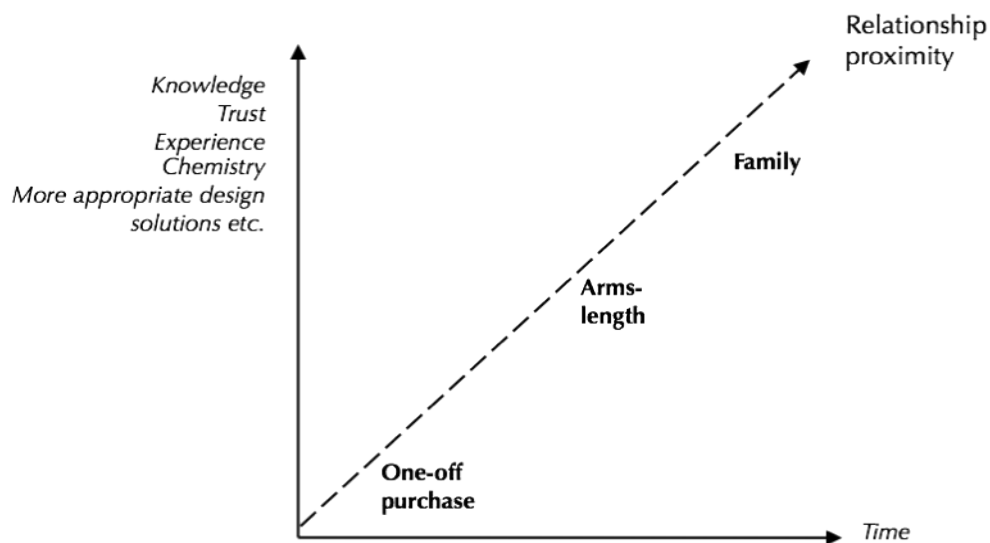
Source: adapted from the findings of Bruce and Docherty (1993)

4.4.1 Choosing a design consultancy: the importance of 'chemistry'

Jevnaker (1998) notes that design is a highly personalised profession. Designers seek to solve complex problems in complex situations, and the people involved are key in this process. The social and path-dependent dynamic that evolves between clients and designers is extremely significant; for example, their mutual history and foundations of the partnership. Jevnaker (1998) suggests that the choice of design supplier is therefore crucial, and advises that the building of long-term alliances is preferential to short-lived affairs. The idea that social bonds are more influential than economic considerations was introduced in the research by Bruce and Docherty (1993), who suggest that the degree of empathy established between client and designer is more dependent on the social aspects such as personal chemistry, the ability to speak the same language, and mutual trust. Bruce and Morris (1998a) concur to posit that the social aspects of the relationship are particularly acute in the consultant designer–client relationship, rather than any economic aspects. These social aspects directly influence the likelihood of establishing a long-term relationship.

Close relationships do indeed appear to affect the project outcomes. Bruce and Morris (1998a), developing Bruce and Docherty's (1993) coda, posit that the better the chemistry that the designer fosters with the client, the steeper the learning curve. Long-term relationships are therefore desirable because they allow better insight into client needs, and hence the creation of more appropriate design solutions. The authors write that 'the designer has to become absorbed and imbued with the values of the organisation as well as the project objectives' (Bruce and Morris, 1998a:45), and that this occurs during positive, enduring relationships.

In developing Bruce and Docherty's (1993) three types categorisation of the consultant–designer relationship, Bruce and Morris (1998a) suggest a matrix of central relationship categories (Figure 4.3), again based on duration and closeness variables. As a relationship endures, it is likely that trust increases. Therefore information transfer increases, and privacy concerns on the part of the client decrease. The authors hence suggest that in a long-term partnership, the dichotomy between control and freedom of creativity is easier to manage. However, it is not guaranteed that proximity and closeness will increase automatically in correlation with a relationship's length. Hence,

there can be trusting, family-style relationships from the early stages, or conversely, design partners can be kept at arm's length over long periods.

Figure 4.3: Relationship matrix

Duration of relationship

Arm's-length Short-term	Arm's-length Long-term
Family Short-term	Family Long-term

Closeness of relationship

Source: Bruce and Morris, 1998a:44

A long-term approach to design in the broader business context is necessary if it is to provide sustainable competitive advantage (Jevnaker, 1998). That long-term relationships evolve on a 'learning by doing' basis (Jevnaker, 1998) means that they can become a competitive advantage (Bruce and Morris, 1998a), where clients trust their consultancy partner so that information transfer is full and smooth. However, NPD can be expensive, and where price is the most important factor to the client, one-off relationships can result.

It has been suggested in the course of this literature review that design is greater than just product aesthetics, and that designers solve deeply complex problems. The research in this thesis, in focusing on this evolving nature of consultancy designer involvement in NPD, gives the potential to look at a range of design situations, and design–client interactions, and renders it a rich and valid context in which to explore the role of design and designers in NPD.

4.4.2 Briefing and communication

Communication with designers is key to the smooth running of an NPD project. The literature notes that the design brief is of particular importance in this respect (e.g. Hales, 1990). Indeed, as much as 80% of costs are decided at briefing stage (Bruce and Cooper, 2000). Briefing is hence crucial to the smooth running of the NPD project, as it is an aid in clarifying the objectives and rationale underlying NPD (Bruce et al., 1995). Briefing and regular communications are critical for effective design management (Bruce et al. 1995; von Stamm, 1998). Moreover, the extensive research of Robert Cooper and his colleagues (Cooper, 1993; 1994, 1995; Cooper and Kleinschmidt, 1995, 2007; Cooper et al., 2004a, 2004b, 2004c) charting the success factors of new products finds that the front-end of NPD is especially important; in the design dimension, close communication during initial project specification has been found to influence product success rates (e.g. Darlington and Culley, 2004; Tzortzopoulous et al., 2006).

The literature suggests design briefing as a logical and meticulously planned process. For example, Bruce et al. (1995:414) describe the brief as a 'comprehensive and detailed' document that states product objectives, target market, pricing and product specification (e.g. shape, dimensions, materials), as well as containing in-depth information on strategy, marketing, production, finance and product attributes. The authors advocate regular communication between client and designer to ensure understanding and correct execution of the objectives. Where communication is irregular, an unsatisfactory design solution results (von Stamm, 1998).

This interpretation of design briefing suggests a one-way monologue from marketer to designer. In this view, the client takes the driving seat in product development, and autonomy versus control becomes a pertinent issue. However, more recent literature considers design as taking a more active and involved part in the product development process (Perks et al., 2005). This means that the tension between autonomy and control must be addressed and adequately managed. This research seeks to explore and better understand the designer's input in NPD.

4.5 Conclusion

This section has outlined the arguments and considerations in the make or buy decision in the design context. The advantages and drawbacks to both the in-house and consultancy routes were discussed. Having identified the characteristics of consultancy design, as well as its prevalence in the design industry, this was considered to be a particularly appropriate context in which to be able to isolate the richness of the designer–client interface, as well as a more dynamic scenario in which to draw out the characteristics of design leadership in mature product categories. A number of different external design interventions were identified, and it was suggested that the client–designer interface and investment vary in each. Finally, it was suggested that in consultancy design, where a design firm partners a client firm, relationships are paramount to the smoothness of the NPD project.

4.6 Summarising the research question

Building on the argument generated across the three previous chapters, a rationale has been constructed for the present research. In Chapter Two, notions of design, designers and design leadership were examined. An emergent body of literature suggests that design is in a period of ascendency. The 21st century market conditions are seen to be leaving designers better placed to lead NPD than marketers, yet the impact of this on the role of the designer is in need of development. Chapter Three looked specifically at design's inclusion in the NPD process. Types of NPD were delineated. The strong commingling of designers and marketers in the development of mature, continuous products was noted. Finally, in Chapter Four, types of design inclusion were analysed. Consultancy design was considered to be an especially appropriate context in which to examine design leadership. The research hence seeks to examine the evolving nature of design, and to fill the gaps in knowledge about what this means for the designer himself or herself. The research question becomes:

How is the leadership role of the consultant industrial designer evolving in the new product development process in mature product categories?

5   chapter five: **research methodology**

5.1   Introduction

This chapter introduces and critically evaluates the research methodology employed in this study. In examining the evolution of design leadership in NPD, a case study approach was considered to be a particularly rich method by which to explore design contexts and uncover designers', and consultancies', insights into their changing roles. The case study design comprised two periods of case study research. First, a primary in-depth, exploratory case study was conducted at an Irish design consultancy. Second, subsequent, 'critical' cases of smaller scale were conducted at three international design consultancies. These cases were used to develop, refine and quasi-corroborate emergent findings from the primary study. The chapter describes and explains how the research was undertaken. Issues associated with methodological and interpretive rigor are discussed to evaluate the quality of the conduct of the research, as well as the trustworthiness of the interpretations and findings of the study.

5.2   Interpretivist stance

An interpretive stance becomes a valuable way to give meaning to a post-positivist paradigm. Interpretivism is well suited to the discovery-driven research aims of the study in hand, its focus being to understand what is happening in a given context (Carson et al., 2001). The central tenet of interpretivism is that epistemology cannot be complete. Rather, interpretivism attempts to establish and understand constructed realities that are subject to change as participators become more informed. Interpretivism holds that the human sciences are concerned primarily with experience and social action, and that knowledge emerges from the interdependence between the researcher and participant (Lindlof and Taylor, 2002): the researcher *is* the instrument of measurement.

It is for these reasons that an interpretivist stance is considered important for a study such as this one which examines human actors (designers and clients) in the creative process (design and NPD). Humans are acknowledged as the most important element in the interpretivist paradigm since realities are believed to be constructed by human subjects in their interpretive practices. I take the view that the actions carried out by humans are infused with meaning, and therefore that this meaning is carried through to their resultant worlds. Of course, subjectivity means that knowledge is open to debate regarding validity (Schwandt, 2000) – the human factor is the great strength and fundamental weakness of qualitative inquiry (Patton, 2002). However, naturalistic setting is a pillar in the interpretivist paradigm (Lindlof and Taylor, 2002), and this means that intimate familiarity and expansionism are both appropriate and mandatory.

This is closely linked to the worldview in which the researcher's position is emic (the human actor is integral and influences how meanings are constructed) and thereby the epistemological view is that knowledge is created (constructed) by interaction between the investigator and respondents (Guba and Lincoln, 1994). Yet the dynamism of constructions means that realities are ever-evolving. Therefore, it could be argued that there is no single, transparent view of the world. It cannot be predicted, controlled or transformed. As a result, reality can only be interpreted by people according to their philosophies or beliefs. For the researcher, I can only aim to '*reconstruct* the "world" at the only point at which it exists: in the minds of constructors' (Guba, 1990:27).

5.3   Research design

The ontological and epistemological lines of enquiry outlined illustrate the philosophical position for this research on what is the form and nature of reality, and what can be known about this reality. This has clear implications for the types of methodology selected. With the exception of the case of the lone master craftsman, the work of the designer has its foundations in the social setting. As has been argued in the literature review, it is the designer's achievement of striking the balance between the 'soft' emotional and the 'hard' scientific that brings about 'functional aesthetic' design. Design as a profession is based in the social sciences, and the human situations that bring about design are complex, imprecise (Roth, 1999) and difficult to measure. A

positivist approach would not enable the emergence of an adequate data set to respond to the discovery-driven objectives set out in this study. Undoubtedly the social context and the participant–researcher relationship are of paramount importance, and this is taken into consideration in the phenomenological approach by means of interpretation and approximation. A precise, quantified dataset would be inadequate in addressing the richness of the explanation, prediction and understanding that the research aims to attain.

5.3.1 Clarifying the research objectives

Clarity in the foundations of the research question is essential prior to the commencement of data collection to ensure a well-defined focus (Mintzberg, 1979), and also before building theory from this data (Eisenhardt, 1989). The discussion that follows outlines the objectives that inform the research design and conduct.

The research question was developed with the proposition in mind that the designer's involvement in product development is expanding and increasing in line with design's ascent to strategic prominence in business. In this respect, the aim of the research is to explore existing theory as to the expanded required designer skill set, as proposed by Perks et al. (2005). The research question becomes:

> *How is the leadership role of the consultant industrial designer evolving in the new product development process in mature product categories?*

Using Perry's (2005) three-dimensional axes of research classification, the central tenets of the study are illustrated in Figure 5.1. First, in developing ideas of design leadership, expansionism and the abandonment of existing beliefs are important. Therefore, the study can be considered more exploratory than confirmatory. Second, in extracting the richness that this genre of exploratory research requires, qualitative enquiry, with its ability to gain understanding of people's – designers – subjective experiences, was selected. Third, this research, with its focus on consultancy design and understanding designers' leadership role, has direct applicability to practice, and therefore veers towards the applied. The applied and basic continuum represents research that ranges

from the highly hypothetical and theoretical (basic) to the practical (applied) (Perry, 2005). Marked with a cross in Figure 5.1, the study is qualitative, exploratory, and applied.

Figure 5.1: Classifying the research on three design continua
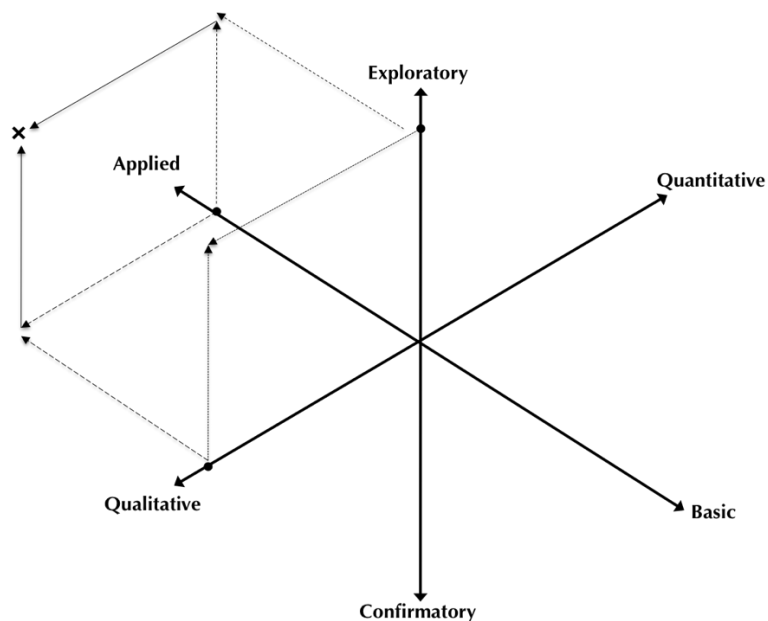
Source: adapted from Perry, 2005:72

5.3.2 Case study approach

Case study research is an 'all-encompassing' methodology comprising design, collection and analysis (Yin, 2003:2). The choice of case study research arises from the desire to understand complex dynamics or 'social phenomena' (Eisenhardt, 1989, 1991). Gall et al. (1996) define a case study as:

> 'the in-depth study of instances of a phenomenon in its natural context and from the perspective of the participants involved in the phenomenon. A case study is done to shed light on a phenomenon, which is the processes, events, persons, or things of interest to the researcher.' (Gall et al., 1996, cited in Perry, 2005:77)

The phenomenon under investigation in this research is the role of the designer as leader. By use of a naturalistic setting, real-life and contemporary events are investigated in a manner that enables the researcher to draw depth from a range of case study data. Notably managerial processes are considered especially suitable contexts for case study research (Bonoma, 1985; Gibbert et al., 2008; Yin, 2003). Indeed, valid theory can only be developed through touching the contextual, realistic setting in which the phenomenon takes place (Glaser and Strauss, 1967; Tzortzopoulos et al., 2006). Case research enables the extracting of the data's key features while maintaining contextual richness (Easterby-Smith et al., 2002), and allowing theory to be constructed (Eisenhardt, 1989). As such, case-based research is particularly suitable in under-researched phenomena where substantial theoretical advances are required (Bonoma, 1985; Brannick and Roche, 1997). Especially where extant research remains thin, as in design leadership from the consultant designer's perspective, the collection of context-rich, empirical evidence has great value in providing support with the aim of improving practice (Friedman, 2003; Tzortzopoulos et al., 2006). This melding of theory and practice was key to the selection of a case study approach. Indeed, much recent research on design and management uses the case method, as described further in section 5.3.4.

Key characteristics of the case study are the use of multiple data sources, the use of direct observation by a trained observer, and contextual sensitivity (Bonoma, 1985; Donnellan, 1995; Eisenhardt, 1989; Yin, 2003). However, the degree to which formed hypotheses guide case study research is debatable. While Yin's (2003) stance advocates the prior development of theoretical propositions to guide data collection, Bonoma (1985) states that a research site can be selected due to a special feature and the case can be constructed around that issue. As such, a problem focus or hypothesis is not necessarily required. Following this stance, case studies can be discovery-driven, and so the method is an appropriate methodology in answering the exploratory objectives set out in this research.

5.3.3 Issues associated with case study methodology

McGrath states that 'all research strategies are seriously flawed, often with their very strengths in regard to one desideratum functioning as serious weaknesses in regard to other, equally important goals. Indeed, it is not possible, in principle, to do "good" (that is methodologically sound) research' (McGrath, 1982, cited in Bonoma, 1985). What this means is that no research methodology can be considered entirely sound. To look at this in another way, data currency (that is, contextual generalisability) and data integrity (that is, reliability/validity) exist in a state of trade-off. Bonoma's 'knowledge accrual triangle', illustrated in Figure 5.2, is useful in explaining this point. For example, a study requiring high degrees of data integrity necessitates a large quantitative sample, precise operationalisation of research variables, and quantitative data for 'statistical power' (Bonoma, 1985:200). One might argue that this genre of controlled data collection, while vast and statistically sound, is less rich. In contrast, a study seeking high currency demands in-depth qualitative methodological techniques in non-scientific, 'noisy' settings that are often uncontrolled. Large samples are difficult to obtain, and often unfeasible. Therefore the goals of the study must be assessed and trade-offs made.

In an ideal world, high levels of both data integrity and currency are sought. However, when making methodological choices, researchers 'must trade one desideratum of research for another' (Bonoma, 1985:200). Bonoma (1985) argues that a practical 'feasibility constraint' forces the researcher to trade some of the data integrity for the generalisability of the study (or vice versa) as a direct result of the choice of research problem and method. In this view, no single method can simultaneously minimise threats to both data currency and integrity.

Figure 5.2: Knowledge accrual triangle
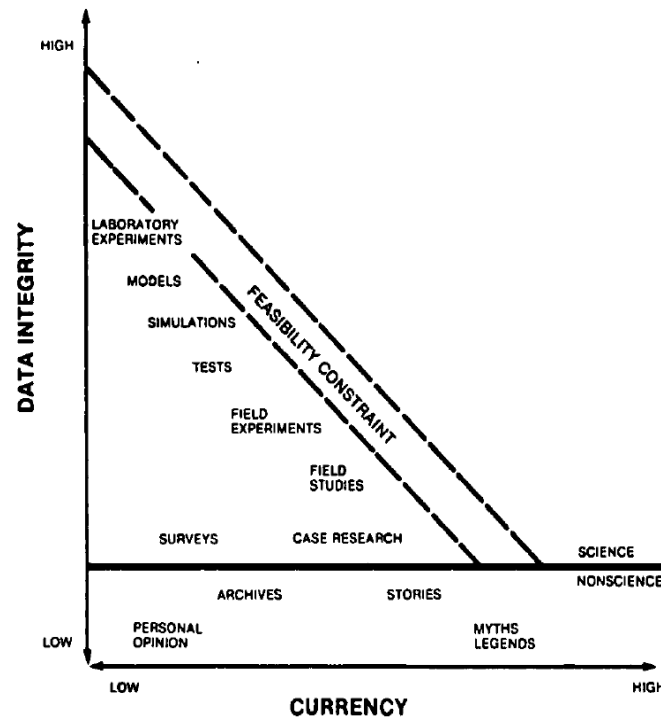
Source: Bonoma, 1985:200

For case study research, this argument is especially valid, as it has faced criticism for issues related to generalisability across populations and incidences. While it may not be possible to generalise from a case study approach in the sense of statistical reliability, it is possible to generalise. For example, Yin (2003:36) describes analytic generalisation, through which 'the investigator is striving to generalise a particular set of results to some broader theory'. Similarly, Gummesson (2000:97) argues that case research can generate novel theory. In his view, generalisability is of lesser urgency when considering the evolutionary nature of complex phenomena. Building on this point, it is finally worth noting that different case studies have different objectives (as detailed in section 5.4). Therefore, the design of the case study plays a crucial role in enhancing its appropriateness to the study at hand.

5.3.4 Case study method in design research

In constructing a research design, it is advisable to consider the research methodologies of other studies on the given subject (Brannick and Roche, 1997). There is a rich tradition of case study methodology within enquiry in design, designers and the design process. This is especially true over the past decade. Case studies have a 'rich history for exploring the space between the world of theory and the experience of practice' (Breslin and Buchanan, 2008:36). Many studies in design and design management deploy a case study approach, and this further guides the methodological choice.

From the perspective of the designer, Von Stamm's (1998) study of the work of consultancy designers used a single case study approach. She studied the work of a design team working on a new motorcycle, and was successful in ascertaining the constructs of the designer–client relationship in bringing the product to market. Breslin (2008) sought to understand what happens when design moves into areas outside of the traditional and functional. In doing so, Breslin focused on a single study of consultancy studio, Ziba Design, and its work for FedEx.

Looking at both the design and client perspectives, Jevnaker's (2005) research focused on cases of 'outlying' firms that have used consultant designers to gain excellence in product design. Jevnaker also selected international examples of design consultancies for exploration of industrial design collaborations.

From the client side, Tzortzopoulous et al. (2006) used a single, interview and documentary evidence based, case study approach to develop a story of clients' activities at the front-end of the design process. Narrative compilation requires deep, rich understanding, and so the reasons for a single-case approach in this study are evident. Bruce and Daly (2007) used a series of cases to understand how marketing and design functions connect and coordinate with one another. By use of three company case examples, Bruce and Daly attempt to draw out exemplary design management principles. Similarly, Moll et al. (2007) make use of 28 Spanish examples of organisations that are deemed above average in business excellence and design orientation with the objective of proposing a generalisable model of best-practice design.

5.4 Case study design

Extant research and knowledge affect the type of case study design (Brannick and Roche, 1997). Figure 5.3 illustrates how case study type is altered depending on existing theory on the topic at hand. The literature review of this thesis has highlighted that extant knowledge on designer involvement in NPD is thin. It has also been argued that design leadership of NPD is in transition. Therefore, the overall approach was of an in-depth, *exploratory* case study to draw out the evolving shape of design leadership, and of a number of so-called *critical* case studies, carried out subsequently, to help develop and further shape the evidence.

Figure 5.3: Logic of case study selection
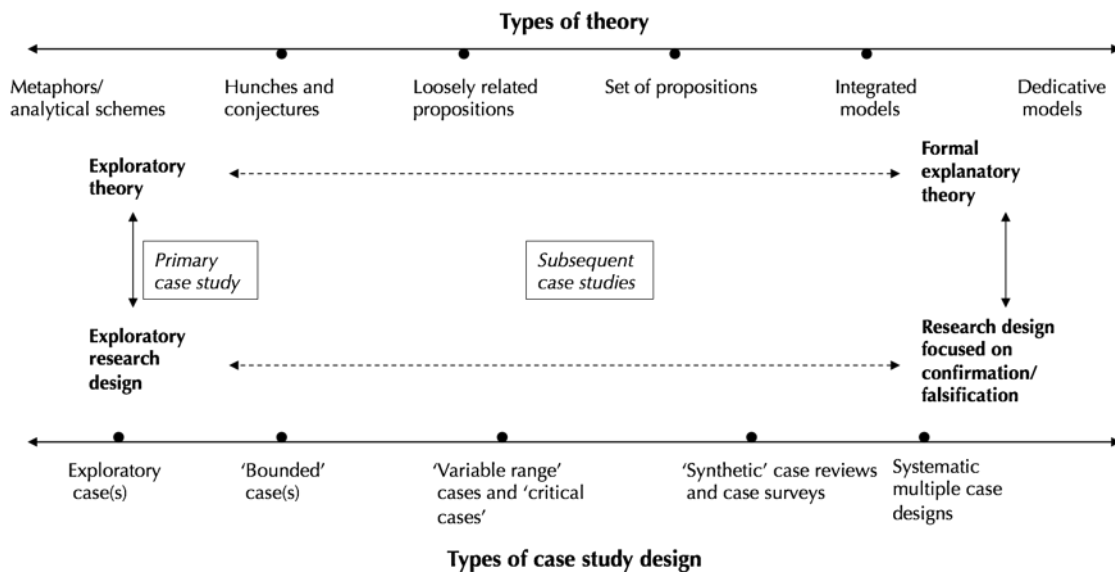
Source: adapted from Brannick and Roche (1997)

The interpretivist approach holds that epistemology cannot be complete, but that it attempts to establish and understand constructed realities, and moreover that these realities are the subject of change as participators become more informed. Therefore, a

two-phase case study design was developed, marked as 'primary' and 'subsequent' case studies in Figure 5.3. A primary case study site was selected for its ability to provide a suitable context in which firstly to explore notions of design leadership. Subsequent case study sites, conducted one year later, are more critical in nature, allowing a loose set of findings emerging during the primary case study to be developed in greater depth, and even quasi-corroborated. Where propositions and theory are emergent on a theme, critical cases are able to generate further theory, and have a greater ability to confirm or disconfirm those initial findings.

The primary case study was carried out in spring 2009. Unrestricted access was granted to a design consultancy in Ireland for six weeks, and I worked full-time in the studio during March–April 2009. The emergent themes arising from this study were further developed and refined in a three case studies of shorter duration, carried out at design consultancies in Germany and the United States in spring and summer of 2010. These consultancies have all expanded, and provide an international comparison.

5.4.1 Site and sample selection

Deciding on an appropriate sample can be problematic, and two key considerations guide the sample selection: appropriateness and adequacy (Fossey et al., 2002). In selecting research subjects, Breslin (2008) offers advice. She suggests that reading the situation in reverse allows the underlying story to be uncovered:

> 'Like an archaeological dig, the story of design's changing nature can be read in reverse. Start with a product that embodies the change, and in its story find hints as to how and why it came to be' (Breslin, 2008:43)

In answering this exploratory genre of research question, the examination of examples of design consultancies (and their design work) navigating this transitionary period in the profession is considered to be the best viewpoint by which to trace the story and shape of the designer's NPD involvement. Therefore, a set of key criteria were identified, guided by the literature in Chapters Two to Four, around which case study selection criteria hinged. As explained and justified in those chapters, those criteria are: (1) designers engaged in NPD, rather than clients or marketers, (2) type of NPD the

designers are undertaking (i.e. continuous, mature product categories as opposed to discontinuous, technologically frame-breaking, innovative categories), and (3) the placing of the design resource in relation to its client (i.e. consultancies rather than in-house teams).

Since the design process differs depending on the company's 'product or service offer, the size, shape and location, legacy of design use, and its supply chains and production systems' (Design Council, 2007:4), other factors such as firm age and size are further considerations in site selection. An established firm allows the exploration of past and present design contexts, and therefore allows one to understand design in its developing context. Furthermore, the size of firm also denotes a range of different design situations (e.g. responding to and initiating design briefs), with a range of designers and different clients. Therefore, variation of findings attributed to individual designer competency is eliminated. The choice of four relatively equally matched sites allowed later cross-case comparison.

5.4.2 Securing access to four case study sites

The study of business organisations is notoriously fraught with difficulties regarding access. Moeran (2005) notes that free access to buildings, personnel and papers is highly unusual. If access is permitted, the signing of a confidentiality agreement usually precedes entry into a commercial organisation, and ethically it is the researcher's responsibility to ensure that any data gathered is not used in manner harmful to the firm. Reservations such as these often impede the embedding of a researcher into a corporate organisation.

Primary case study

After initial contact was made within the Irish design industry, I was fortunate to be granted unrestricted access to my primary case study site – Design Partners – which fulfilled all of the case criteria. It is a well-established consultancy, with a range of high-profile clients in mature product categories. Design Partners, Ireland's largest

design consultancy, was founded in 1984, and grew steadily throughout the late 1980s and 1990s. It was known to be in a period of transition as it sought to endure the tough economic period of the post-Celtic Tiger since 2005.

Having met and discussed the research with the managing director and other board members on several occasions prior to commencing the fieldwork, I understood that the consultancy management were keen to strengthen the company in its period of transition. This serendipity enabled the exploratory nature of the study. Management were open to the prospect of a researcher entering and analysing the consultancy, and were extremely cooperative in opening all doors to the staff, the premises and the clients. The MD in particular actively encouraged and enabled me to spend prolonged periods in the company of his staff, as well as at their inter- and intra-company meetings.

Subsequent case studies

The subsequent round of three case studies was conducted one year after the primary case study research. These comprised three of the world's largest design consultancies. While the in-depth study at Design Partners provided a contextually rich insight into the consultancy designer's role in NPD, further probing, refinement and development of these themes was required for research rigour. Design Partners was in a state of transition due to the national economic downturn, but it was also competitively successful on the international stage, and the MD was seeking to expand the studio abroad. By studying consultancies that already had expanded internationally in several sites, but which had a similar genre of multinational clients operating in mature product categories, a broader exploration of designer involvement in NPD would be enabled.

DesignworksUSA, Smart Design and frog design are united in their longevity as industrial design consultancies. All are established over 30 years; all were founded in the US and have internationalised. Smart Design has bases in Europe and the US, while frog design and DesignworksUSA have expanded into Europe and Asia. These consultancies had opened studios on several continents, but had the same genre of

client as Design Partners; this enabled the issues arising in the primary case study to be further developed and refined.

Negotiating access to such high-profile consultancies was difficult and involved a lengthy process of telephone and email correspondence with contacts within the firms. At each of the firms, I asked for interviews with a range of designers and design management. The requests were answered in varying forms. At DesignworksUSA, for example, an opportunity arose to visit the studio over two days, and to interview five members of staff. At frog design and Smart Design, I was offered the opportunity to visit the studio and interview designers on one day. Privacy levels during visits to the consultancies varied, and this is described later.

5.5   Data collection

Case study methodology allows for a number of sources of data to be collected during the lifetime of the study; for example, interview, archival and observation (Yin, 2003). Due to the variation in length of time spent at each site, the sources of data varied between the primary and subsequent case study sites, and these are compared in sections 5.5.1 and 5.5.2. At all sites, interviews of a semi-structured nature were conducted and recorded. 19 interviews were conducted in total. Interviewees were consultancy designers and studio managers, all trained in industrial design. Table 5.1 shows details of the interviewees, their positions and assigned codes (which are later used in the analysis chapters of this thesis). These interviews lasted between 30 and 120 minutes.

	Interview code	Job title	Role
Primary case study:			
Design Partners	DP1	Junior designer	PD
	DP2	Junior designer	PD
	DP3	Senior designer/portfolio manager	PD
	DP4	Senior designer/creative director	PD
	DP5	Senior designer	PD
	DP6	Senior designer	PD
	DP7	Design manager	PD, M
	DP8	Design engineer	E
	DP9	Design director, senior design manager	PD, M
	DP10	Senior design manager	PD, M
	DP11	Consultancy co-founder	M
Subsequent case studies:			
Designworks USA	DW1	Business development manager	M
	DW2	Studio director	PD, M
	DW3	Creative director	PD, M
	DW4	Senior designer	PD
	DW5	Junior designer	PD
frog design	FD1	Senior (principal) designer	PD
	FD2	Associate creative director	PD, M
Smart Design	SD1	Consultancy co-founder, studio director	M, PD

Codes:
PD   Practising industrial designer
E   Engineer
M   Management

Source: the researcher

5.5.1 Primary case study

The case study was carried out over a period of six weeks, during which the research was embedded full-time in the research site. This type of ethnographic study can be termed 'focused' (Knoblauch, 2005). Focused ethnography differs from conventional ethnography in its temporary yet intensive nature. It is especially suitable where a fragmented professional field demands a highly detailed interpretation of a social

phenomenon (Knoblauch, 2005). The study mixes the features of conventional and focused ethnography. In Table 5.2, the two types of ethnography are compared, and the shading denotes the features of the present study. For example, while the focus was on writing the findings after each day into a case diary, a main feature in conventional ethnography, the case study took place over a shorter period, as in focused ethnography. In other ways, both methods were adopted; for example, in some situations I was observer, while in others I was participant. This was the result of the variety of work encountered in design consultancy studios. Therefore, the study is termed 'quasi-ethnographic'.

Table 5.2: Comparison between conventional and focused ethnography

Conventional ethnography	Focused ethnography
Long-term field visits	Short-term field visits
Experientially intensive	Data/analysis intensity
Time intensity	Time extensity
Writing	Recording
Solitary data collection and analysis	Data session groups
Open	Focused
Social fields	Communicative abilities
Participant role	Field-observer role
Inside knowledge	Background knowledge
Subjective understanding	Conversation
Notes	Notes and transcripts
Coding	Coding and sequential analysis

Source: adpted from Knoblauch (2005)

This type of quasi-ethnographic method, where an open approach is adopted, was helpful since previous research on the subject of designers' role in design leadership is limited. The primary case study design is holistic, and all data pertaining to the study can be regarded as evidence. It is therefore reliant on multiple sources.

Phase one

This case study was conducted in two distinct phases. The first phase was the quasi-ethnographic phase, which endured throughout the fieldwork. I worked full-time in the studio, and observed the work of the designers on a day-to-day basis. It was initially envisaged that a full day would be spent which each designer, shadowing his/her work and discussing events as they unfolded. However, after the first shadowing day, it was found that designers were reluctant to be observed and questioned full-time. This was attributable to work pressure and tight deadlines. Shadowing was therefore unfeasible, and the structure of the fieldwork was re-evaluated.

Thereafter, the research unfolded more organically. It became evident that designers were more comfortable with the ad hoc approach than they were with me 'sticking' to them throughout the working day. I spoke with designers each evening to find out their agenda for the following day. If they had a client meeting, team meeting or conference call, I arranged to observe or listen-in. In this approach, I quickly gained an overview of the various projects happening across the consultancy. If there were no special events, I would spend time 'floating' in the studio, and sit with designers in the workshop or at their desks. I was regularly invited to attend meetings silently, and sometimes vocally to offer opinions on creative work, and during this time took notes on my observations.

This variation offered a multidimensional perspective on the activities for which the designers were responsible. I was able to engage with designers in situations ranging from the very formal to the very informal. This ranged from formal scenarios such as client meetings, conference calls, intra-company meetings to informal situations, for example at designers' desks, in the workshop, over lunch, and at non-working time events. The scale of formality of the data sources is illustrated in Figure 5.4.

After each 'event', formal and informal, I recorded a narrative in the case diary at my own assigned desk, and I did this over the entirety of the lifetime of the study. I was also party to company documents in the course of the study. Details of what was seen were again recorded in the case diary. This data, combined with observational data, makes up the content of a substantial case diary.

Figure 5.4: Sources of data – primary case study

EXTREMELY
INFORMAL

EXTREMELY
FORMAL

Non-working
time events

Breaks and
lunchtime

Workshop

Desks

Intra-studio
meetings

Conference
calls

Client meetings
and presentations
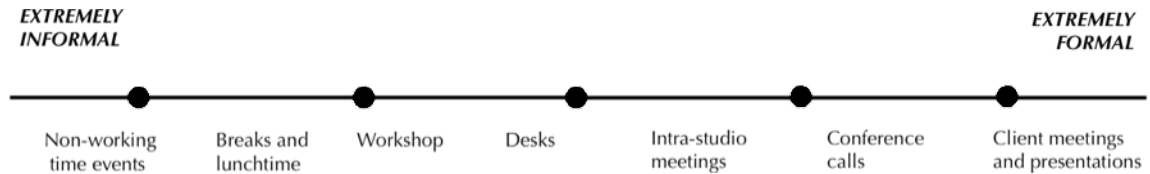
Source: the researcher

Phase two

In the second phase, I conducted the semi-structured interviews with designers on the Design Partners' premises. After several weeks conducting the quasi-ethnographic research, loose ideas had begun to emerge. These recurrent themes constituted the topics followed in semi-structured interviews. Other themes were probed based on the knowledge that was built up from the interviewees during the course of the study; for example, their experience and projects in which they were involved.

The interviewees were selected according to their role in the company – a range of senior and junior designers and managers were chosen. Eleven team members (that is, one-third of the entire staff) were interviewed. These interviews took place over the course of the final two weeks of the case study, and each was between one and two hours in duration. At the outset of each interview, subjects were reassured that the information would be treated in confidence and anonymously. Background knowledge of, and rapport with, the designer and his/her work was a significant factor in the nature of the interview itself. For example, during the quasi-ethnographic stage of the study, understanding of each designer's current projects and past work was built. Therefore, the tone of the interviews was quite informal, with much in-depth reference to company knowledge (for example, project code names), company vocabulary, past events and other associated staff and named clients.

Developing this idea, rapport and relationships formed over the course of the study, as is common in the workplace. The researcher became a trusted part of their studio environment. Therefore, during interviews the subjects seemed at ease, and were arguably more inclined to impart opinions and feelings on the themes discussed, enabling particularly fruitful interviews. Goffman (2005) suggests that this rapport in face-to-face interaction is common. Throughout this study the researcher's identity became crucial, and this is a key feature of qualitative research. Qualitative enquiry is uniquely personal and involved, and, as described in section 5.2.2, the researcher *was* the instrument.

5.5.2 Subsequent case studies

The primary case study allowed the construction of a rich dataset. One year was spent in the analysis of this data, from which three findings emerged. However, in order to refine, develop and quasi-corroborate these initial findings, an international comparison was considered appropriate to enable a broader view. Contacts were made, via a 'cold calling' approach, with three internationally renowned consultancies, all in the 'top ten' of the world's largest industrial design consultancies. The choice of international consultancies was based around the notion that these firms were successful in integration of design and business, as all had internationalised from modest beginnings. The sources of data from these subsequent cases are now described.

DesignworksUSA

As in Design Partners, DesignworksUSA's management were open to the potential of insight offered by an external researcher. However, access was more difficult than at the other case study sites. After considerable negotiation and communication via email and telephone discussions with key contacts at the consultancy (the Business Development Director and Studio Director), an invitation to spend two days at the European studio in Munich was secured, along with interviews with a range of junior and senior designers, and design management.

Time was spent making introductions with many members of the design staff over lunch on the first day. Later, a tour of the corporate and communal areas of the premises allowed the taking of observational notes. Over two days, interviews were conducted with five members of staff at various levels of authority. All are design trained; three were in management positions. Interviews were semi-structured, and the theme sheet was based on the initial findings from the primary case study.

Some more junior interviewees had a poor command of English; the Business Development Director attended meetings to act as interpreter. Personnel were guarded about revealing accurate details on high-profile clients, for example dates of product launches, and therefore discussions were more generalised. This data was combined with data of a secondary nature, gathered from literature on the consultancy and its work.

frog design

The US-based research sites were less restricting than that in Germany. The prevailing mood at frog design was of openness, reflective of the general US approach to doing business. Through email negotiation, an invitation was secured to conduct interviews with two designers – a principal designer and a creative director – at frog's New York studio. One respondent was female, and this was the first female interviewee encountered in a male-dominated industry. A semi-structured interview approach was adopted. The same themes were explored throughout the three subsequent cases. Afterwards, a tour was given across the studio, without restriction, and observational notes were made in the immediate aftermath. Frog has an expansive website and shares much intelligence with the wider design community via blogs and magazines. The primary data was therefore combined with a body of secondary data on the consultancy.

Smart Design

At Smart Design, an invitation was secured to interview an eminent co-founder of the consultancy, who is well known in design discourse and public speaking. The respondent was extremely interested and communicative, and therefore the semi-structured interview lasted 120 minutes. This interview was based on the themes that had arisen in the primary case study, and was extremely free-flowing, allowing for new ideas to be picked up and developed. I was offered a tour across the studio and, like frog, the mood was of openness. Observational notes were made immediately after leaving the premises. This data was combined with secondary data on the consultancy and its personnel to create a substantial body of knowledge.

5.6   Data analysis

Data analysis involves reviewing, synthesising and interpreting the data with the aim of describing and explaining the phenomenon under investigation (Fossey et al., 2002). An efficient and well-structured data management system is vital for its tracking, assessing and documenting (Miles and Huberman, 1994). The interpretive, discovery-driven nature of the study meant that an inductive approach was adopted to data analysis. This mode of analysis required consistent cycling back and forth at data collection and data analysis stages (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Miles and Huberman, 1994). Especially while in the primary case study field, this iterative approach enabled the identification of emergent themes. Moreover, it offered the opportunity to investigate these issues in greater depth throughout the case period.

Analysis therefore took place in two phases: first, primary case study data analysis and, second, subsequent case studies data analysis. As a result, and as described in section 5.5.2, the interview guide for the subsequent studies was constructed from the primary case study data analysis. In Table 5.3, the thesis' structure is illustrated in relation to the phases of data analysis. The data from the primary exploratory case study was first analysed, and three findings emerged, which are presented in Chapter Six. Next, three findings building on the first three arose in the subsequent case studies at international consultancies, and these are detailed in Chapter Seven. The sets of findings are

integrated in models presented in Chapter Eight. Finally, these are discussed and brought to conclusions in Chapter Nine.

Table 5.3: Data analysis structure

Primary 'exploratory' case		Subsequent 'critical' cases		Integration and discussion	
Finding 1	→	Finding 4	→	Integrated models	Conclusion 1
Finding 2	→	Finding 5	→		Conclusion 2
Finding 3	→	Finding 6	→		Conclusion 3
Chapter Six		Chapter Seven		Chapter Eight	Chapter Nine
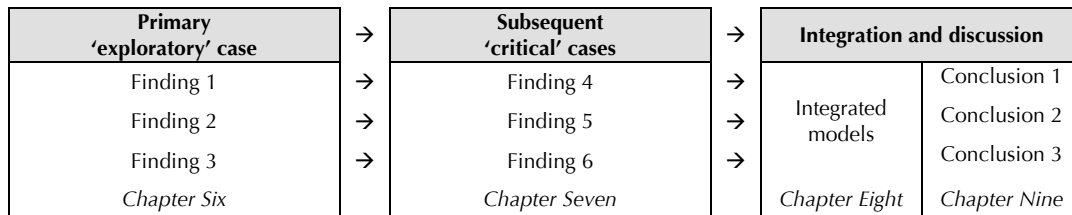
Source: the researcher

There is no formula that can transform data directly into findings (Patton, 2002), and this contributes to the criticism of qualitative research described earlier. However, there are methods to ensure thoroughness and rigour in analysis of qualitative data. In the present study, the guidelines used for analysing the data were developed from Eisenhardt (1989), as well as advice from a number of academic studies (e.g. Miles and Huberman, 1994; Patton, 2002). The various stages are now described in greater detail.

5.6.1   Stage I: Data processing – transcription and within-case narratives

The first stage of analysis is the processing of the accumulated case data. Narratives of the case studies were written, as advocated by Eisenhardt (1989). This took place after each day of fieldwork, and comprised analysis and reflection on both primary and secondary data. Concurrent analysis and data collection therefore occurred in both primary and subsequent case study periods. These narratives included rich description of observation, interviews, conversations, meetings, documentation, and artefacts (in the case of the primary study), and of the interviews, observation and correlation with secondary sources in the case of the subsequent cases. These were all kept in the case diaries.

Transcription of interviews was the second main area of data processing. In total, over 24 hours of interviews from the four case study sites was transcribed. This was typed up into a text file in the days following interview. This allowed freshness to be maintained. Transcriptions are a verbatim account of what was said in the interview. All transcription was completed entirely by the researcher, without the assistance of voice recognition software. Trustworthiness of transcription is a fundamental part of rigour in qualitative research (Poland, 1999). This process is argued to have enabled immersion in, and acute understanding of, emergent, previously unconsidered themes. The data-processing techniques employed, including transcription and sorting the data after each day, meant that data was prepared for coding and analysis at an early stage. Indeed, processing and analysis happened almost in tandem.

It follows that the key headings emerged very closely to the time spent in the field. On processing and checking the transcriptions and case narratives, three broad headings emerged. These are termed 'units of general meaning' (Hycner, 1999). The units of general meaning that emerged were: (1) design leadership, (2) designer–client relationships, and (3) changing styles of design consulting. Units of general meaning allow the identification, naming and categorisation of data (Denscombe, 1998). Therefore, the units of general meaning enabled the classification and categorisation of data under the broad headings. It was then easier to prepare data for more in-depth content analysis.

5.6.2 Stage II: Content analysis – identifying recurrent themes

Following data processing and its simultaneous initial analysis, in-depth content analysis took place, and the beginning of this stage was a protracted process. Content analysis allows the identification of common themes from the distillation of large volumes of data, such as transcriptions. An inductive approach to content analysis was considered appropriate for this type of exploratory research where themes and categories emerge *from* the dataset, rather than the deductive mode where a pre-determined set of themes and categories is used to organise quotes (Kelly, 2010). In essence, the inductive approach adopted allowed for organisation of the raw data into

'interpretable and meaningful themes and categories that are generated from the data' (Kelly, 2010:110). Indeed, in discovery-driven research where extant research is thin, findings are identified during data analysis rather than before (Eisenhardt, 1989).

Eisenhardt (1989) notes that the identification of constructs is an iterating process, involving constant 'back and forth' between the evidence and the emergent ideas. In cycling back and forth between the data and the units of general meaning, recurrent sub-themes began to emerge. These can be termed 'units of relevant meaning' (Hycner, 1999). The data could then be further sorted and categorised under these sub-headings. This was considered to enhance the validity of the data. Indeed, Eisenhardt and Graebner (2007) note that this cycling process keeps the theory objective since continual reference to the data helps to keep the researcher 'honest'. It was during this stage that large volumes of context data had to be organised. This necessitated the construction of a database of evidence, and presented the issue of whether to use an assistive computer program.

Assistive computer programs

Computer-assisted qualitative data analysis software (CAQDAS) programs have become popular in the past decade. Many studies have used software successfully to store, retrieve and order vast quantities of qualitative data. Several software packages exist with capabilities ranging from storing of the data to the most complex systems that assist in coding and analysing it; for example, *nVivo* and *NUDIST*. These packages assist in ordering the data into a more palatable format, and identifying patterns of words and phrases. CAQDAS software is also an aid to ensure transparency and rigour in the mode of analysis.

However, Denscombe (1998:219) argues that 'the extent to which computer packages can aid in the analysis of qualitative data is a matter of controversy'. This controversy is attributable to several factors. First, software can only be an assistive tool in analysis and interpretation, since each qualitative study and the context-rich data arising from it are entirely unique. Second, software can constrain and distort the data (Denzin and Lincoln, 2008). The researcher, with his/her proximity to the data in terms of having been involved in its collection, puts his/her own intellect on the framing of the issue in

hand. Therefore, the conceptual process of data analysis and interpretation must be carried out by a researcher. Third, in the nature of a study such as the present one, where the researcher *is* the instrument, the researcher's personal closeness to the context of the data collection influences its analysis.

These reasons, along with completion of a short course in the operations of *nVivo*, brought the conclusion that CAQDAS packages can do little to enhance the researcher's ability to analyse the data and theorise the findings. Rather, a proprietary system for data storage, data retrieval and building the findings (as described in section 5.6.3) was developed.

In this approach, computer software is a crutch, albeit a useful one, in assisting data analysis. Moreover, on completion of coding via the proprietary means, a latitudinal and longitudinal view comprising themes longitudinally, and deeper evidence constructs latitudinally, was synthesised. A CAQDAS system is 'neater' in its arrangement of the data. Therefore, it is doubtful whether the same rich and complex interplay of the emergent themes, as we shall see, would have been realised using the software packages available on the market.

5.6.3 Stage III: Building evidence and sharpening themes

The sharpening of the headings and the construction of the evidence pertaining to them took place over the same timeframe as the data analysis. A database was constructed in *Excel* to order the evidence. Four sheets were created in the *Excel* document to incorporate the evidence pertaining to four case study sites, and evidence tables were built for each finding at each research site. Eisenhardt (1989) advocates tables as a sound method for summarising evidence in this type of analysis. In total, 12 evidence tables were constructed (i.e. one table for each of the three themes at four sites). The titles of these are shown in Table 5.4. An example of this system is illustrated in Table 5.5, which summarises the evidence pertaining to Finding 2 gathered at the primary case study site.

Table 5.4: Summarising the building of evidence

| | Chapter 6,
Findings 1-3 | | Chapter 7,
Findings 4-6 | |
	Design Partners (DP)	**DesignworksUSA (DW)**	**frogdesign (fd)**	**Smart Design (SD)**
Theme 1: designer's work	**Evidence table 1:** designers' work at DP	**Evidence table 4:** designers' remit and responsibilities at DW	**Evidence table 7:** designers' remit and responsibilities at fd	**Evidence table 10**: designers' remit and responsibilities at SD
Theme 2: designer-client relations	**Evidence table 2:** designer-client relationship establishment and development at DP	**Evidence table 5:** intricacies of relationship between designers and clients at DW	**Evidence table 8:** intricacies of relationship between designers and clients at fd	**Evidence table 11:** intricacies of relationship between designers and clients at SD
Theme 3: nature of design consultancy	**Evidence table 3**: evolution of design process at DP	**Evidence table 6:** changing nature of design consultancy work/projects at DW	**Evidence table 9:** changing nature of design consultancy work/projects at fd	**Evidence table 12:** changing nature of design consultancy work/projects at SD

Evidence building began with the three key headings – the units of general meaning. As sub-themes – the units of relevant meaning – were synthesised from the data, these were organised beneath the broad headings. Using an iterative process, whereby transcriptions and diaries were consistently re-read, interpretive codes were then assigned to phrases, sentences, and in some cases complete paragraphs of description/transcription. Multiple coding of the same sections was in some cases necessary, and is common in exploratory studies where themes overlap (Miles and Huberman, 1994).

The ideas contained in the sub-theme were then described in a few key words, and initial sources were coded next to the unit of relevant meaning. Themes were built according to, for example, language used by the designers interviewed, topics raised by the interviewer the course of the semi-structured interviews, and topics raised by the interviewee. These themes were refined and evidence built latitudinally; for example, another column stored quotations taken from the interview transcripts that illustrated the theme. The transcription sources were then coded and inserted. The final stage of data analysis involved the cross-referencing of themes to other case studies. This is now described.

Table 5.5: Example of evidence building, Finding 2 (primary case study)

Stage I: Unit of general meaning: designer–client relationships

Stage II   *Stage III*   *Stage IV*

Units of relevant meaning	Initial source (case diary)	Identification of recurrent themes	Supporting quotations	Sharpening descriptions	Cross-reference
Tensions, frustration, disillusion, disenchantment, clash of ideals	CD 30/3, 2/4	Knowing when to roll over and when to fight, market research, tug-of-war, who knows best, managing disappointment	'I would have kinda fought for it, and some of the senior designers would still fight a little bit for it, but I think that can go down quite badly with them' (DP7:5)	Tension when clash of design/client ideals manifests	FD1–2, SD1
Being autonomous, in control, trust, respect	CD 30/3	Lax briefing, 'I'll know it when I see it', chaotic client, steering	'there's nothing more important than a good brief. Not too tight, not too presumptive, you know, still allowing room for innovation and ideas, but very empowering but clear, especially clear about the target market, and the objectives of the project, and what success looks like, things like that' (DP11:2-3)	Designer taking a greater control of client, project, relationship	SD1, DW1,2
Designer passion, emotional attachment, offspring	CD 14/4, 16/4	Not just a job, striving for best product, legacy, churning out products, sensitivity	'you're proud of, it's your baby, you've been caressing it for months' (DP2:13)	Designer attached to product, and wants to do best for it	SD1, FD1–2, DW3, DW5
Nurturing relationships, 'marriages', clients as friends, inseparability	CD 1/4	Selecting designers specifically to gel with clients, 'right people for right projects'	'you need to build up an equity and a trust with the person you're working with … in a way the more intimate the working relationship is, the better. And the product will probably for it too' (DP5:5)	Smooth relationships make for smoother projects	DW1–3, FD2
Performance, fitting people together, acting, directing, putting on a show	CD 23/4	Gaining trust, being authoritative, confidence putting on a show	'sometimes you're actually like a casting director, fitting the right people together … to get the right designer at the right time' (DP9)	Convincing the client of validity through performance	SD1, FD2
Asymmetry in relationship, symbiosis	CD23/4	Unclear deliverables, blurred boundaries, in-house or outsourced	'you are tied up, people expect you to react like that [clicks fingers]' (DP9:15)	Unclear contract with client, and designer goes beyond request to create best product	FD1–2, DW2

5.6.4 Stage IV: Integration of the data

The last stage of data analysis took place on completion of the fieldwork and the analysis of data arising from each case individually. On building evidence for each finding at each case study site, the arising concepts were cross-referenced to the findings at other sites. The main themes were supported at multiple points, especially between the primary and subsequent case studies.

This step enabled a cross-case comparison. A comparative table was assembled, and this is shown in the integrative findings chapter (Table 8.1). This table compares where the themes and sub-themes arose across the four case study sites. It enabled a synthesis of research findings. This cross-comparison once more warranted the reading and re-reading of the processed data to ensure that the themes did indeed fit with the evidence in the case. Therefore, it ensures data validity.

Finally, a comparison with the extant literature was carried out to ensure external validity. Eisenhardt (1989) proposes that more valid theory can be built by the application of the emergent theory to other contexts. Therefore by looking for corroboratory or conflicting theory in a range of literature, the researcher was able to build theory adequately and validly from the findings.

5.7   Conclusion

This chapter has described, justified and critiqued the methodological approaches adopted in this study. It first outlined the philosophical foundations in choosing a research methodology. The choice of case study methodology was then explained, along with the implications arising from this choice. The negotiation of the case study sites, and the execution of the fieldwork period, was described in some detail. The chapter explained how the rich data set was interpreted. A structure for the analysis of the data, and how the findings were extracted from this, was explained. Finally, the mode of evidence building is illustrated. The following chapter presents the first of the findings.

6 chapter six: **primary case study – findings and analysis**

Primary 'exploratory' case		Subsequent 'critical' cases		Integration and discussion
Finding 1: A broadened designer remit	→		→	
Finding 2: Interface of designer and client	→		→	
Finding 3: A changing business model at Design Partners	→		→	
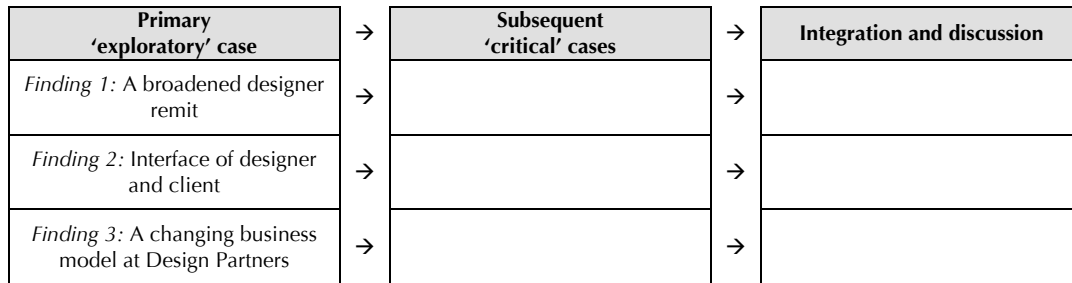
6.1 Introduction

The primary case study, exploratory in nature, was carried out at Design Partners, Ireland's largest industrial design consultancy. Design Partners, established in 1984, employs over 30 design professionals comprising industrial designers, design engineers, model makers, and administrative staff. The managing director (MD) is founder and co-owner, along with a number of other senior design staff. Key clients are international and local, and operate chiefly in the consumer electronics and homeware products – mature, continuous categories in significant part. Design Partners offers expertise in product design from beginning to end of the product development process. Its current motto is to 'manifest our clients' brand through great product design' (www.designpartners.com). The evidence presented in this chapter is based upon the evidence collected at the case study site. Therefore, this chapter is based upon Evidence Tables 1-3 (Table 5.4).

6.2 Research site: Design Partners

Design Partners' studio is based on an industrial estate on the outskirts of Bray, a town on the southern rural–urban commuter fringe of Dublin. The studio is open-plan. Upon entry, all visitors immediately see an overview of the office and staff. This is reflective

of the consultancy's work ethos, where transparency and openness pervade the company, and its attitude towards visitors, from delivery people to clients. Its working attitude is honest, clean and personable. In the reception area, which sometimes doubles as a meeting area, completed Design Partners products are showcased (Figure 6.1).

Figure 6.1: A meeting in Design Partners' reception area

The studio doubles as office space, and the layout runs counter to archetypical creative environment. For example, desks are arranged in rows, each designer occupying a metre-long space; designers face one another. Low dividers separate (Figure 6.2). This area is used for all work and design activities, including sketching. Each designer has a fixed PC. Senior designers also have laptops for when they wish to work outside the confines of the fixed desk. Along the outer wall, three separate rooms act as a meeting area, and as the offices of the finance director and the MD. These are divided by glass partitions.

To the rear of the premises, there is a large workshop and a small kitchen. There is no communal staff recreation room. The kitchen area does not have seating space, and the lunch space is a table in the corner of the open plan unit. Surprisingly there are few objects, books or magazines to be found in the studio, possibly due to the shortage of space and storage. The industrial workshop houses state-of-the-art CNC (computer numeric controlled) prototyping machinery, a sculpting workshop, and a ventilated spray-room (Figure 6.3). Four full-time model makers are employed. While much design work comprises the production of computer renderings, the designer's personal inclination dictates the extent of involvement in 3D foam model making. One senior designer noted that he is spending less and less time in the workshop due to an increasing volume of management and administrative duties. All designers do, however, have skills in 3D sculpting, and undertake it to some extent.

The premises are a bone of contention for staff. At one company-wide meeting, an open forum for sharing problems or issues with management, a senior designer requested that the office space be upgraded or refitted. It was apparent this has been an ongoing request over several years – the Bray premises was originally supposed to be a temporary measure, rented in 2002 when staff numbers were smaller. Seven years later, however, it has become rather more permanent as workshop facilities were assembled on-site. That a once-temporary studio has become permanent foreshadows, in a sense, a move to a new 'space' for the company.

Figure 6.3: Design Partners' workshop facilities

6.2.1   Organisation of design projects

Project teams are small and dynamic. 'Portfolio' managers are lead designers who look after a family of products for the client. For example, the Logitech gaming products portfolio is overseen by one lead designer, who works with two to three more junior designers on the individual projects making up the portfolio. This ensures that brand message and product values are consistent. The consultancy's creative director then manages the work that Design Partners undertakes for Logitech in its entirety.

6.3   Finding 1: A broadened designer remit

Synthesising and interpreting the data built in Evidence Table 1, the work, remit and responsibility of the designer is found to be moving beyond the aesthetic and functional details of the project. Designers at Design Partners recognise that their role is greater

and has more insight than merely surface detailing. The job remit is expanding to encompass product strategy – in this respect, the designer is taking greater ownership of the NPD process. This section, in presenting the data from Evidence Table 1, highlights this developing of the designer's remit. For reasons of confidentiality, quotations pertaining to specific client and designer identities have been edited.

6.3.1 The designer-marketer

The findings indicate that designers are *au fait* with the language and craft of business, and in particular marketing. In a number of ways, the designers use this accruing expertise to strategically take a greater degree of responsibility for the design process in an enlarged context. This means that design roles are greater than the functional and the aesthetic: designers also imbue commercial and strategic value in designs.

Designers are at pains to 'fit' the design to the brand, the greater product 'family' to which it belongs, and to the user. This was clear at concept presentations I attended. At one particular conference call, a lead designer was presenting ideas for a potential project to a US-based client. This type of assignment was termed an 'exploration' phase, and the presentation consisted of slides and discussion lasting one hour. During the first 30 minutes, the designer gave a monologue describing in minute detail the users that the product would target, while the client listened almost in silence. The designer had identified user groups, and segmented these based on demographic. This was a particularly intricate study: (1) forenames were assigned to these groupings based on personal characteristics of the typical user, (2) real-life situations where the product would be used were described, and (3) reasons for purchase were identified corresponding to demographic. In the remainder of the presentation, the designer pitched his design ideas to the client. Design features related entirely to the segmented user groups, and were justified based on how the target groups would relate to and use them. In essence, the designer adopted the job of the marketer in rationalising and justifying the product – the marketer's only remaining task was to ascertain whether to give the project the final go-ahead. In this example, the designer's natural instinct to create directly according to user needs is revealed in the great importance assigned to

segmentation. This type of marketing task can perhaps be considered a natural extension of the designer's primary role.

Designers build on the conventional marketing mode of hard, measurable data with more intuitive, tacit data, often gained through personal and informal means (developed later in section 6.3.6). They employ *both* approaches in a win–win fusion of the tangible and intangible. Designers refer to justifying their ideas through 'stories', composed of accumulated images and words – a scenario around which the product would be relevant. This demonstrates the designer's acceptance of the need for a sales pitch, and their embracing of the principles of marketing.

It appears that the marketing approach to selling concepts is relatively new to Design Partners. On the company intranet, I looked at concept presentations for similar products presented in 2005 and in 2008. In the 2005 example, just one slide was dedicated to the user, brand, and industry (i.e. competitor products). The presentation focused on a diverse, scattered array of design concepts and features without a coherent direction. Designers termed this the 'machine-gun' approach. In contrast, the 2008 presentation matched the depth of the marketing and segmentation focused conference call presentation I attended. The first half of the slides examined in great detail the user, purchase motivations and brand. The designers had identified a set of four key words encapsulating the 'spirit' of the product – all the qualities that it should possess. The second half of the slides detailed the design concepts in relation to these key qualities.

In making this shift to an approach that aims to guide the client's decision tactically, design teams are smaller and more integrated, and are managed by a lead (senior) designer. Concepts follow a holistic vision. Designers told me that they would normally present no more than six ideas at concept presentation. A junior designer explained that selectivity in what was, and was not, shown was critical in guiding the client to make the right decision for the brand. In describing the move away from the machine-gun approach, he said that offering strict guidance on concept selection was better than offering choice and scope to make a wrong decision:

> 'I think what we should have done was be a lot more selective, lead the client, choose the concepts that we felt were really correct for the target market, give the client some kind of insight, and help them make a decision, rather than say "which would you

like?" [laughs]. Whereas sometimes the client isn't the target market, and he might like one, and he might pick one which is the wrong direction, so there is responsibility on us to help them do that as well' (DP2:7)

Planning a convincing marketing case

Many designers talk about the synthesis of stories around design concepts as crucial to their validity. As though in a court of law, every design decision has to have a set purpose and creates an argument that designers use to plead the case to the client – the judge. For designers, their role is far greater than just the practical aspects of design. It is also making the design relevant for the market.

Designers recognise the change of direction in their role. For some the role has broadened, while for others it has just changed. Many also note that less time is now spent on the 'hands-on', traditional workshop-based aspect of design, and that more is spent in administrative, managerial chores. For senior designers, this means that most of the time is devoted to strategy, while renderings – the practical design work – are largely the domain of juniors. All designers engage in workshop sculpting to some extent, and all are client-facing.

The reorientation towards strategic, conceptual work is apparent. In interview, several designers noted that their work was greater than simply product form. A senior designer referred to the 'emotion', the 'spirit' and the bigger 'story' around the product, which must be linked to a holistic marketing 'vision':

> 'we're being asked to bring more to the table than just the form of the product. We're being asked for the emotion and the spirit and the big story, and the strategy to link much more with marketing so that the vision that marketing have for a product that doesn't exist yet is embodied when the designer starts to make the product tangible, and that story is together with designer, marketing. That story is maintained and when it arrives on the shelf, that story is still there, hopefully' (DP6:11)

In this court of law, designers become deeply involved in the creation of the holistic marketing vision. Storytelling marks an extension to the profession to encompass marketing principles. How this product will be relevant on the market, and user motivations to purchase, become considerations within the designer's remit. This heralds a greater responsibility in product development.

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In building this legal case, designers draw from a variety of sources; for example, witnesses and artefacts. One junior designer compared himself to a 'sponge' – his job is to absorb all 'insight' that can add to the story, and hence to enhance the product quality and justification of the concept. His job is more than simply drawing 'pretty pictures':

> 'I keep using the word "insight" – but I think "insight" takes in a lot of that, which is brand, end-user, social studies, competitive research and filter that – our job isn't just to draw pretty pictures' (DP2:7)

Like lawyers, in soaking up a range of insights and sources, designers are on the path to eliminating randomness from their stories, to build coherence and validity. The stories inform every subsequent step in the process, every mark on the paper. A senior designer suggested that the story is one of the first steps in the design process. By clearly planning, he creates an angle – a spin – on the project. That unique spin 'guides' him to better make decisions:

> 'I decide to build a story before I start drawing. Before I put pen to paper, I try to have an angle on what I'm doing so that I can explain it at presentation. And that kind of guides my hand when I'm drawing' (DP4:6)

Like the lawyer, the designer's angle is well formed such that all steps reinforce this story. A junior designer described the story as a vehicle for 'translating' all the qualities required into a feasible, tangible design. The notion of translating intangible concepts, qualities and ideas into tangible, saleable products was recurrent. Making the intangible tangible involves the designer acting as a sensor, a sponge, to all of the external stimuli that might influence design outcomes. Translating is crucial and makes the concept 'credible', saleable or valid:

> 'I wouldn't present a concept based on "here's an idea". I think that it needs a story to have credibility, even the subtle detailing … So you're kinda translating, or taking some of that inspiration and translating it into design' (DP2:6)

In this approach, the designer's responsibility is mutating: the designer's role becomes quasi-marketer. Designers sketch only after a bigger picture is formed – the 'story' that enhances the client brand – and this is significant for three reasons. Firstly, the designer's intimate awareness of the values of brand is striking, along with his/her

strategic responsibility to those values. In some cases, this is the result of co-creation of the brand over several exchanges with the same client. Secondly, the extension and scope that the designer devotes to the creation of marketing spin around his core task is evident. It is also noteworthy that time devoted to this is equal to, or outweighs, time spent in the studio on traditional, practical design work. Thirdly, it is clear that the designer's responsibility goes beyond the traditional functional tasks of design, and now encompasses a strategic commercial dimension.

Designer salesman

Designers sought to convince clients of concept validity, and models and sketches were only one tool in achieving this objective. More and more, the idea of the sales aspect of design was becoming of paramount importance. The 'sales pitch' was a performance, crystallised during client contact. One junior designer described his job as equivalent to sales:

> 'basically what we do every day is sell our insights, sell our thoughts, our designs, our sketches, our renderings and our skills' (D2:14)

To that end, designers were savvy about the world of business. Many spoke in the language of the marketer, and demonstrated an acute understanding of the hierarchies and political processes common in large corporations. Yet the job was regularly compared to artistic performance – musical, sporting and theatrical. The nature of the design performance seeks to marry the irrational aesthetic and functional aspects with the rational business objectives.

6.3.2 Taking responsibility for the brand

At Design Partners, designers not only care about the projects they work on, and the users for whom they were created, but also are concerned for the clients' longer term needs and their brands. Marketing-savvy designers are well aware of the theory of brands, values, visions and promises, and strive to encapsulate these in products. This represents a further dimension to the designer's mission. A junior designer remarked in

interview that he is extremely analytical – 'careful' – in designing in order to build the brand:

> 'Because to develop a brand, you've got to be really careful on what products you release, not only for the target market, and for all the other reasons, but for the brand itself and to help the brand grow. You need to be very selective, you have to choose a direction, so there has to be a much higher bird's-eye view of what you're doing' (DP2:7)

Such was the symbiosis between Design Partners and its long-term clients that the consultancy plays a role in creating the client brand visually and strategically. For example, a senior designer was drafted on to the client team to take a design directorial role over the course of a year, and was creating a set of directories for the client's brand: (1) the product language, (2) the brand colours and (3) brand visions. Ironically, these documents would be shared with the other consultancies hired by the client: Design Partners was not only providing brand direction for the client, but also to other directly competitive consultancies, such was the close symbiosis with the client.

For another client, the consultancy assisted in the creation of a holistic brand identity by narrowing down the product range. The client had previously been using a range of design services, and sometimes merely stamped the company logo on generic, bought-in products. This diversity in visual product strategy had resulted in a weak brand. I viewed a presentation created by Design Partners for this client visually highlighting this motley crew of products. The presentation had a strong strategic dimension – it encouraged unification of product, and perhaps also the use of a sole consultancy. The lead designer on the project told me that after giving this presentation, the client asked him to create, from scratch, the brand and its identity 'through product':

> 'xxxx wanted to consolidate their brand identity, and started to ask in particular to not focus so much on wild creativity, and showing our creative breadth, but to focus on the xxxx brand and its identity through product' (DP4:1)

Like the concept presentation tactics and the creation of visual language directories, designers offer brand creation and leadership through a range of different activities. This often takes the form of offering extra guidance, foresight and advice to clients. In having the ammunition to do this, a manager told me that Design Partners funds trips to trade fairs in order to accrue extra knowledge and insight on the industry sector. Designers then offer clients reports, free of charge, based on what was uncovered. This

type of proactive 'training' is strategic, and only economically viable where the client then contracts a portfolio (range) of projects to the consultancy based on that insight:

> 'in this case we do this almost as part of training, going to the likes of *Ambiante* or whatever. And seeing what the trends in kitchenware are – two or three of us go every year, and then put something together for us here. So at the moment, we're giving it to the client free in order that we get a portfolio of work from them every year. If we were only getting one project out of them, that would be different, we would be asking them – we wouldn't send three people over for the sake of one job, so it's economies of scale' (DP10:24)

In this example, where designer–client partnerships become strong, the designer becomes more informed and empowered to create with greater insight. In co-creating the client brand, designers become leaders and advisers of the client's business. At a company meeting, a senior designer reinforced for colleagues that 'this isn't about a personal journey here, it's about designing for a brand' (case diary 23/4). He later explained to me that his mission is to ensure that designers understand the brand, and in doing so, continually develop and communicate its values:

> 'there is [*sic*] borders to their creativity when they're working for a brand. It's not about their own individual creativity, you're designing in context … my job is to try and help our junior designers understand that and to guide them' (DP4:4)

Designers are taking responsibility for the fulfilment of brand promises. Design is about the client company, rather than just about aesthetic design. During the case research in 2009, Design Partners was having a new, multimedia website created by an external agency, and it received a preliminary internal launch while I was undertaking research at the studio, where staff were invited to contribute ideas and material. The website was a vehicle for self-promotion and marketing, holding a bank of case studies of previous projects that potential clients could browse. However, the most striking part of the new website was the revelation of the company's motto – 'to manifest our clients' brand through great product design'.

That the motto of a design company, run entirely by designers, embraces the terminology of marketing is revelatory. In this, Design Partners is shifting beyond the creation of form to the creation of visual brands. Ironically, it is embracing the art of business that enables the consultancy to strengthen its clients' brand propositions. In interview, the managing director spoke about his vision for the company, often using marketing terminology:

> 'we understand much more clearly than we would have done 10 years ago that manifesting products, a company's brand proposition in a product form, that the product would reflect the brand and would communicate it, was much more important to the company, and much more important to our brief' (DP11:8)

This indicates a shift in the terrain of practice. Design Partners has shifted into a place where it co-creates its clients' brands. No longer are projects isolated, but all work is synergised, and is part of a coherent whole. Part of the role of designers is to understand the brand, and in doing so, designers take responsibility for matters far beyond the functional and aesthetic.

6.3.3 Designer as project manager: gluing together a multidisciplinary team

Designers are assuming a greater degree of ambition than merely offering the surfaces to an already conceived object. They are creating (1) the concept, (2) the brand with its vision and values, and (3) the product's functional and aesthetic attributes themselves. This provides illustration of Perks et al.'s (2005) suggestion that design is transitioning from a functional discipline, to a player in a multidisciplinary team, towards taking a leadership role in NPD. This is clearly manifest at Design Partners. The number of disciplines and subfields involved makes modern-day industrial design increasingly complex and the product development process increasingly fragmented. The number of players and range of insight required provide real challenge in synergising the various stakeholder inputs. This is one way in which designers assume leadership of product development projects. Designers describe themselves as the 'glue' holding together multidisciplinary project teams, and coordinating the input of other stakeholders. In interview, the MD noted that this was a strength of Design Partners: 'we are good at being the glue in a multidisciplinary team' (DP11:9).

Being the glue holding together a complex process means managing and organising the various inputs in a timely and functional manner, and synthesising these into a feasible, tangible idea. For one senior manager, this role almost fell by default on the designer:

> 'Because you are often the glue to synergise research, market data, anthropology even … you know, you can take all the data and it be coming from lots of people –

engineering – but the designer's somehow expected to be the person who ultimately does synergise it' (DP9:14)

The notion of fragmentation and complexity in NPD was recurrent. The role of the designer is complicated where he was sticking all these inputs together to form one idea. A junior designer described the multidisciplinary, multifaceted development project as a complex orchestra of sounds. In this analogy, a 'conductor' is vital to the melody, especially when projects are large, with many musicians. In a design project, he compared the lead designer to a conductor. The lead designer is charged with ensuring that all inputs of the team are synchronised. Interestingly, the lead designer can be a non-participative designer:

> 'I'd say the bigger the project, the stronger the conductor needs to be, even if he's maybe not going to draw anything. So you need one guy to say "no no, your blue needs to be" – it's weird to say that – "your blue needs to be slightly more red, put more red in your blue!" or stuff like that! Yeah you need one guy like that. And if the project is smaller, you can be the guy who's doing that on your own' (DP1:17)

At Design Partners, the project management role is adopted by designers themselves, with the exception of projects with large clients, who often assign an internal project manager. Effectiveness of the external project manager was variable, depending on the individual recruited, and this affected project outcomes. A senior manager made note of these differing situations concerning team orchestration and leadership. Synergising a team, he noted, is a strategic task, often best fitted to the design consultant because of his broadened perspective. As a consultant external to the client firm, the designer had greater success in leading a team than a client-employed project manager who is inextricably bound up in internal politics:

> 'it's becoming increasingly complex for one person to satisfy all those different aspects, so therefore you end up with multidisciplinary experts, and then you have the challenge of how you can get the various disciplines to work together effectively, and that's where you need a good team. And often the industrial designer can be a pretty good glue for that – you can use example of sometimes on the client side there can actually be politics between the teams in the client, and the external consultant can somehow be a glue where somebody internal isn't able to be that glue' (DP9:4)

In this realm, the designer as a project manager takes overt responsibility not only for the design outcome itself but also for the process, and the remit expands into management of others in the NPD process.

6.3.4 Design–marketing functional symbiosis

Crossover between marketing and design tasks is evident, and the findings indicate that designers are engaging in traditional marketing activities. The proximity of design and marketing is also evident; however, such is the symbiosis between the functions that something of a 'chicken and egg' conundrum can arise. The kick-off for a project is one such area. Designer or client may initiate the project, but the crucial first step for the design is gaining understanding of user, market and brand. Only once this has been established does he/she create and detail a product. A senior designer described the process of building a 'case persona' as being fundamentally 'intertwined' with marketing:

> '[we] created some personas, thinking about the individual, getting images of products that they may have in their life already that they associate with this type of price point, this type of usage market. Build up a case persona, and once we have that we might contact the client again and say "this is what we're thinking about". It's like we're continually working with them, rather than going away and coming back with a formal presentation – we tend to work a bit more intertwined with them' (DP3:3)

Interestingly, the two processes are parallel and ongoing, and the collaboration is dyadic, but the approaches of marketing and design differ. The cultural disconnection is evident in practice, but whose input is most prominent is ambiguous. A senior designer suggested that the dialogue between marketer and designer is a necessary prerequisite to 'success', but that a tug-of-war can ensue. Designers consider their interface with marketers like a process of negotiation, where it is necessary to 'challenge' ideas:

> 'So you get the initial vision from, you know, the marketing person finds out there's a niche in the market and a certain product would address it, and if we do it well, it's going to be a great success. And the designer's job is to answer that challenge then. But during the process, there should be a dialogue where the designer should challenge what the marketing viewpoint is, but should also put on the table solutions to what marketing have asked you to do. But there should be room to challenge ... there needs to be a dialogue between the designer and the marketing person or people, especially early on' (DP6:4)

Challenging marketing's vision for products is typical of the 'passionate' designer who aims to create the best products for client and user. Another senior designer expressed

the importance of being able to challenge the client, and mark his own creative stamp on the project:

> 'I feel uncomfortable if I'm just being fed insights by the client – it feels as if they're kind of doing my job for me' (DP4:7)

The passionate designer cares deeply about the projects on which he/she works. By synthesising data with personal research and intuition, the creation of a convincing marketing story is enabled. By taking this care and responsibility to gather extra insight, he/she is able to wield greater ownership in the process.

Control–authority tensions

The clients' über-reliance on hard, 'reliable' data causes frustration for designers, especially where the designer knows immediately when the 'right' solution is conceived. Each project must go through routine motions and processes to arrive logically and methodically at the chosen idea. At concept stage, clients expect to be presented with a pool of several ideas from which the 'winning' product could be selected. When so many designers report knowing innately when they 'nail' a winning concept, this a generator of extra work:

> *Interviewer*: 'so why do you think that they [client] asked you to spend all that time doing the other research?'
> *Designer*: 'because that's what marketing want – they want to see options, they want to see options, they want to see options' (DP3:8)

That every project follows the same pattern attempts to rationalise a process that cannot be generalised. One senior designer attributed this to the differences in approach to product development of designers and all other business disciplines. For him, the value attached to design is 'visceral', not logical, and therefore it could not follow a rational path of development:

> 'I think we talked before about valuing design, and it's fundamentally not logical, it's a visceral reaction, not any logical reaction, so it's very hard for companies that are managed by accountants, engineers etc. to quantify the value of it' (DP5:9)

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The disconnect between designer and client is clear: while designers appreciate the client's motivation to enhance product success, quantifiable managerial frameworks are secondary to how they work. While the client relies on 'box-tick', procedural modes to move a project forward, this contrasts with other rather chaotic characteristics of the client organisation. Often, large clients are unsure of exactly what they want (developed in section 6.3.7), and when briefs are terse, there is a reliance on designer guidance.

This conflict in approach is a precursor to designer upset over not being taken seriously as a design 'authority'. Request for ample choice is linked to notions of respect, especially in those situations where clients are not overwhelmed by concept presentations. Being asked: 'is that all the options?' was regarded as the most 'dreaded' response to a presentation by one senior designer. For him, this was fundamentally an issue of respect as an authority. Where the designer makes a presentation of valid propositions, in his view, one of these should be selected:

> 'we try and make propositions, we try and present what we believe is a full proposition, which in a way is easier to present … but sometimes you run up against, and sometimes you hear the dreaded "is this all the options?", and it's like "well this is what we're proposing, if you pay us as a consultancy this is what we're proposing"' (DP5:7)

I attended an example of such a presentation with a visiting US-based client. The client liked two concepts of the seven presented, and took four away for further user testing. However, the client also suggested an amalgamation of some features of the two favoured concepts. After the meeting, the lead designer on the project told me that these are termed 'cat–dog' designs. In some situations, he told me that this type of client request has resulted in designers producing the 'bastard child' of the presented concepts. Although not made explicit, one would suspect that this causes *angst*, and it undoubtedly generates additional workload.

However, in those well-established client–designer relationships where the design consultancy has contributed to brand creation, it is plain that a high level of authority is exercised by the designer. A senior designer described concept presentations as being more analytical than mere description of the concepts. Sketches and models were an aid in communicating findings and opinion:

> 'they will ask you your opinion as well because there's a very good relationship there and they trust us, sometimes they ask for our feedback as well. And in general when you're presenting concepts now to xxxx, it's more opinion-based than descriptive. We're kind of answering the "why" questions as we're presenting' (DP4:8-9)

Again, the partnership with the client is an influencer determining the extent to which the designer takes a strong guiding role in the product development process. In general, where the partnership is enduring, risk is lower and trust in the designer high. The likelihood that the client will like and accept the concepts shown is high. However, a senior designer described difficulty in ascertaining when to take control, and when to 'roll over':

> 'we're in quite a difficult position there I think, because we can get abused a little bit I think, for our … they want us to take control of certain situations, and roll over in other ones, so it can be much more difficult' (DP4:10)

Some clients were less of a 'supervisor' in a back-seat role, and more of an 'adviser', presiding over every decision. The findings illustrate that designers are often ready to assume a greater leadership role, and in his/her expanded capacity of authority, the trend is for the designer to guide and lead the client. However, an ambiguity in the partnership, perhaps attributed to the external position of the design consultancy, can in some cases limit the extent to which this takes place. It requires experience and background knowledge on the part of the designer to discern the advisers from the supervisors, to know when to take control and when to be subservient. Hence where design leadership is concerned, Design Partners' position can sometimes be ambiguous between design leader versus client follower.

6.3.5 The design–performance tension

The extension and increasing complexity in the role of the designer is accompanied by a set of designer and consultancy tensions. Designers acknowledged and actively embraced their adoption of the role of marketing. However, the consultancy's state of ambiguity – service provider versus design authority – caused tension.

Designers were meticulous, almost to the point of being pedantic, about the minuscule detail of their designs. One senior designer confided that his colleagues 'really care

about what they're doing, and they love what they're doing' (D4:12–13). Designers managed their own time and budgets and were therefore responsible that projects came in on time and on budget, and this work-integrity meant that working hours regularly stretched beyond 6pm, sometimes into the night. Compromise of design ideals therefore becomes a dimension of the job.

Necessity of compromise meant that the ingrained passion and quest for 'great' design appeared to last only so long. For some designers, often those more senior, there was little attachment to the hundreds of designs churned out. One senior admitted to not owning anything he had designed. In contrast, for those more junior, projects and completed products were compared to offspring.

Tension and disillusion

Recognition of the client quest for increased revenue from design resulted in an uneasy tension between the business of design and the creative, liberal, right-brain attitude of designers passionate about the work that they do. A senior designer was disillusioned about the notion of being design-led:

> 'Sit in on client meetings and you'll see interaction of how things become design-led … but it's actually money-led' (case diary, 9/4)

Frustration regarding compromise and short client reins resulted in jadedness and intense disappointment, not in their current positions, but towards the nature of the profession as a whole. It manifested in the realisation that clients recruit them not for the sake of 'great' design, but for the purpose of revenue and increased profit margins. The bottom line was that design is business.

That the individual is responsible and personally attached to the work is a characteristic of the service provider. However, the firm sought to meld, depending on client, both service-providing activities and exercise authority as a consultancy, which brought a lack of clarity in internal and external perceptions. In some ways, designers were essentially service providers, and engaged in an elaborate performance, orchestrated to convince the client of validity of propositions. However, in other regards the designer

was a consultant and acted with authority, guiding the client based on respected expertise.

6.3.6 Undertaking of 'market' research

During a talk at the Lisbon Experimenta design festival (EXD'09), the English Hong Kong-based product designer Michael Young revealed to his sizeable audience: 'I do no market research – it's bullshit. I design from here' and he patted his stomach.

The juxtaposition and conflict between the design and marketing disciplines is perhaps most vehemently manifested in attitudes to research. While some well-known designers, like Michael Young, are repulsed by the mere mention of research, the nature of the design project means that designers disengage their own views from the project in hand and consider those for whom the product is intended.

Designers at Design Partners are hyper-aware that their mission is to satisfy the needs of stakeholders in the product development process – the user and the client principal among them. All are adamant that they do not undertake design for their own sake. One junior designer described his job as the balancing of all stakeholders involved in product development:

> 'even that [designer's vision] needs to be a compromise, your vision can be compromised. We're not artists, we're doing something that needs to be used and needs to be made, and not just made like one or two products, it's more mass market … but the fact that there is budget, there is technical issues of course, and all those stuff … You have your idea … and you need to reach the best, you need to model your idea slightly to get it for the best price, and for the best closer to your idea, to the usability, for the look, for the user, interface' (DP1:7)

In this 'compromise' exemplar, there are client-imposed restrictions, usually stated during the course of development. However, designers also describe acquainting themselves with the user in order to balance client requirements with user needs. It is therefore paramount to 'step into the skin' of the user.

The studio is a predominantly male environment, yet many projects are aimed at a female user. A senior designer described a project where colleagues recruited sisters

and daughters as research subjects in order to understand a young, female demographic. Likewise, a young junior designer related the story of a meeting where he invited colleagues outside of the immediate project team, including the female studio secretary, to gain other perspectives. He described how her input enabled him to better understand the target user:

> 'It was very, very interesting to see, especially for all the feedback from xxxx, because we have a very technical point of view almost, we shape, we see, we see visibility as well, but I cannot imagine myself as a 30 or 40 years [*sic*] old woman' (DP1:1)

The personal attributes of the designer are evident as an integral part of the handling of the project – one cannot help but be influenced by personal experiences and interests, and these are naturally used to build closeness to the project. Another junior designer told me that his personal interest in the industry sector in which his client operated was incentive to engage in extra-curricular research that provided extra 'insight' into the user:

> 'Cause I'm into gaming, I tend to keep up with all the forums, do research, talk to my friends and gamers that I know, I'm on the gaming blogs a lot, so I'm able to provide that bit more insight into the projects I work on' (DP2:4)

While this type of informal 'insight' is encouraged, accepted and useful, a client preference for conventional, measurable, and apparently rigorous research frustrates designers, and is a bone of contention. Several described difficulty in communicating and justifying to clients the informal research that they undertake. Moreover, many articulated situations where ideas were based on a 'feeling' or a gut instinct. One senior designer spoke about the conflict between the ideologies of the two sides. In his view, the design profession is based on 'soft' feelings, while the client seeks 'hard' data:

> 'a lot of the time we are going on what we feel is the right solution, and what we feel is the right solution, and that's probably correct, that's what the designer should be doing. But then on the other side of the table, there's someone who wants data to know that the decisions being made are based on research, and that's something that can be a little bit difficult, designers aren't very data driven you know' (DP6:10)

Conflicting backgrounds and training of marketers and designers make for a sometimes misunderstood relationship. Another senior designer explained that this type of soft, tacit feeling – the gut instinct described by Michael Young – is exceedingly difficult to

sell to the client on the other side of the meeting table. In interview, he 'confessed' to his own reliance on gut instinct as though a cardinal sin:

> 'I tell you, a lot – I probably shouldn't tell you this – but I rely a lot on gut instinct. And these things that I can't measure and I can't – you know when you're round the table with a client, and they have marketing statistics and engineering has figures, and I've got gut instinct on a certain thing, and it's very hard to convey that somehow. But sometimes when I'm working here, often when I get a brief, often the first sketch that I do is the right one, the one that wins. Because it's my feeling about it, it's a gut reaction' (DP3:14)

Feelings, 'sensing', and gut instinct on ideas and concepts are regularly acknowledged as powerful methodologies for intuitive designers. Perhaps this arises from the closeness between designer and project. Interestingly, feelings for concepts at Design Partners are often deemed to be correct. However, that this is verbalised only in confession illustrates that it remains problematic and difficult to justify. Where managers adhere to the professed rigour of hard data provided by marketing and engineering – reliable statistics and mathematical models – expenditure based on a feeling is risky. It is difficult for managers to swallow, and for designers to sell. That the battle for design recognition at managerial and board levels is uphill is palpable.

6.3.7 'I'll know it when I see it' syndrome

Despite the haziness surrounding exactly what designers are commissioned to do, as confirmed by the oft vague and curt briefs (see also section 6.4.6 on design briefing), it transpires that clients are sometimes quite unsure what they want from designers, and abdicate responsibility. While this allows greater ownership to be seized by designers at the early concept generation stage, it also causes frustration. One senior designer described 'I'll know it when I see it' syndrome. Where clients have little specific idea about what they want from the product, at the review meetings, they often tell designers 'I'll know it when I see it'. The senior designer, inspired by popular marketing guru Seth Godin, was critical of his clients' assessment of concepts based on the worship of successful competitor products:

> '"Yeah I'll know it when I see it". He said that good marketers know it before they see it, and if you come up against one of these guys who knows it when he sees it then it's not true – you know it when someone else is successful' (DP5:7)

Indeed, at a concept presentation review I attended, before any ideas had been shown, one of the first things uttered by the visiting client – a global product manager – was 'I'll know it when I see it!' (case diary, 28/4). To counter this woolliness and uncertainty, designers become strategic in how concepts are presented. At concept presentations, the ordering and discussion around ideas is of as much importance as the physical models themselves, and is one way in which designers take a greater responsibility. Tactics are devised to steer clients in particular directions. After another concept presentation, the lead designer revealed to me that the six presented concepts had been selected and ordered to push the unwitting client towards the designer's favoured ideas. These ideas, he felt, offered the best balancing of product qualities. The inclusion of a left-field concept was termed a 'sacrificial concept', and was included to highlight features in other concepts.

However, the 'wicked' nature of a design process means that its course is typically marked by numerous tributaries, and where woolliness and uncertainty on the part of the client occurs, it enables designers to seize a greater degree of project leadership. A senior manager told me that normally the client arrives without a clear vision of the outcome. It is therefore the designer's job to 'ask the right questions':

> 'inherently in a design project, especially the more ambitious ones, there are unknowns and the client will admit to that, he'll say "here's what we know, here's what we think, we're coming to you because you can make this real, we know that you'll ask the right questions"' (DP9:6)

The result of assuming greater responsibility for project specifications and design outcomes, the client's reliance on designers asking the right questions, reflects Design Partners' orientation towards an authoritative consultancy status rather than a mere service provider. By adopting some of the tasks traditionally in the remit of the marketer, by offering the client a greater degree of guidance and insight, designers are assuming greater control of the product development process, beyond the traditional realm of design. However, a tug-of-war to find the balance of ownership between the designer and client approach is not easy. It was often fraught with tension, paradox and conflict between the two disciplines.

6.3.8 Pan-NPD responsibility

Ultimately, the extent to which leadership is assumed and respected by clients depends in large part on the constellation of the designer–client relationship. Where partnerships are enduring, the designer appears to command a more respected input, and assumes greater authority in the product development process. In this scenario, the designer also takes a greater responsibility for brand development, along with greater personal responsibility to the client, and the product. A senior designer disclosed in interview that it is relationship longevity that enables growth in responsibility and design input:

> 'It's just one of the benefits of working with a long-term client because you get to meet interesting people, share insight with them … I suppose the other benefit is through osmosis, you kind of absorb the feedback over the months and the years of other things, which come out when you get an opportunity. Whereas if I was coming in cold, I wouldn't have had that advantage' (DP3:11)

The wider the remit of tasks for which a designer takes responsibility during a long collaboration, the more he/she understands about the client company and its brand. By default, this results in greater empowerment in areas such as brand co-creation and development, and therefore more input across NPD. In short, the designer has more opportunity to make an 'impact'.

Yet the designers are ambitious, and often set the bar extremely high. A senior designer remarked that relationship longevity should not impact on the design outcome. Rather, self-expectations are high so that all clients receive the same level of service. This would be achieved through in-depth study, research and synthesis of the client's previous products:

> 'I suppose if I was coming in cold, I would still expect myself, as a designer, to look back at their previous products, and try to absorb as much as I could from the positive attributes' (DP3:12)

The designer tends to be honourable and self-motivated, on the quest for the production of an optimum design solution. In doing so, he/she takes charge of the situation, and assumes a personal responsibility for the project, the consultancy and the client. A senior designer suggested that the notion of design constitutes going beyond what the client tells him:

'I feel uncomfortable if I'm just being fed insights by the client – it feels as if they're kind of doing my job for me' (DP4:7)

For these designers, responsibilities are clearly expanding. Designers are trained industrial designers, recruited to produce product, objects, for the client. However, their thought processes extend to the marketing of how the product is packaged and sold, and this is a consideration throughout the design process. This becomes part and parcel of their mission as product designers, and often constitutes extra work for which the client did not budget. A senior designer describes this process as helping to get perspective on a product, and as having impact even in concept selection:

'y'know sometimes we throw in sketches of the packaging and logos and just to help them get into the frame of mind in order to select a concept' (DP5:1)

Designers are rational and thoughtful, and at each stage guide the client as to the best decision for production and marketing. As such, design involvement surpasses the studio design work in a project. It is also production- and marketing-related. Each step of the NPD process – including production, manufacturing, packaging and marketing – is a consideration for the design consultancy.

6.3.9 Conclusion: designer assuming NPD leadership

Across the NPD process, designers are adopting a greater and wider reaching range of tasks beyond the traditional realm of design. The findings of the research indicate that designer involvement is spread across the entire NPD process, and extends into areas not traditionally associated with the designer. Figure 6.4 illustrates how designers' input infiltrates each step in a typical NPD process at Design Partners. Especially noteworthy is the consideration of the principles of marketing. Particularly at the front-end of NPD, designers engaged in the tasks of marketing, and the remit of the 'designer–marketer' encroached on that of the traditional marketer. Such is the scope of change in the remit that designer abilities and competencies are evolving in line. Fluency in communication and management skills are becoming a necessary complement to traditional design training.

Figure 6.4: Areas of designer involvement in NPD

	Project kick-off	Concept development	Development	Manufacture	Launch/follow-up
	•Brief: formal, informal, or proactive brief	•Small integrated teams	•Close liaison with client	•Overseeing process	•Press photo models
	•Internal brainstorms	•Capturing the product 'spirit'	•Materials, surface, finish	•Approving PA iterations	•Product feedback
	•Client liaison (email, IM, conf. call, meeting, visits)	•Creation of: market analysis, sketches, foam models, prototypes	•Production of 3D file with design engineer	•PB iterations	•Improvements
Exploration		•Presentations for clients at review meeting	•Often lengthy reiterations	•Visits to vendors	•Re-design
•Ideas for potential projects		•Deliverables: market analysis, sketches, prototypes			

Marketing consideration:

Segmentation	Demographics	User testing		Brand development
User research	Purchase motivations	Packaging		Launch consideration

Source: the researcher

A pan-NPD involvement means that designers have crucial input in the process, and is resulting in the partnership with the client becoming more symbiotic. Designers take responsibility for guiding and advising clients. Design Partners has grown to understand its key clients so well and intimately that it has almost moved in-house, and in one case it was even seconded onto the client team. Partnerships such as these, long and short term, enable designers to take on a greater degree of project and client management. This is occurring across rank and experience, and with or without a formal, structured training period.

Project management is manifest across a number of activities associated with organising for design, including: (1) identification and suggestion of potential opportunities to clients, (2) writing appropriate project briefs, (3) management of the design budget, and (4) liaison with manufacturers. Designers' responsibility even extends to the creation and subsequent development of the client brand image. Designers see this as their responsibility, and another component of the product development process, where individual products are part of a wider concern. In one

instance, these designers also guided the work of the other design studios contracted by the client.

As Design Partners transitions from a conventional marketing-led consultancy to a strategic consultancy, designers participate in all stages of the NPD process, and therefore must be well versed in the full range of expertise. The designer's role becomes a difficult-to-define mix of the functional and the conceptual. Figure 6.5 shows a breakdown of designer responsibilities by broad NPD phases. At the front-end, involvement is conceptual and analytical. In the middle stages, input is functional and tangible, and encompasses more traditional design objectives. At the back-end, involvement is again more analytical, requiring management skills. Designer NPD participation is no longer confined to the middle stages. Rather, a continuous input from pre-conception to launch becomes the norm.

Figure 6.5: Designer involvement in broad NPD phases
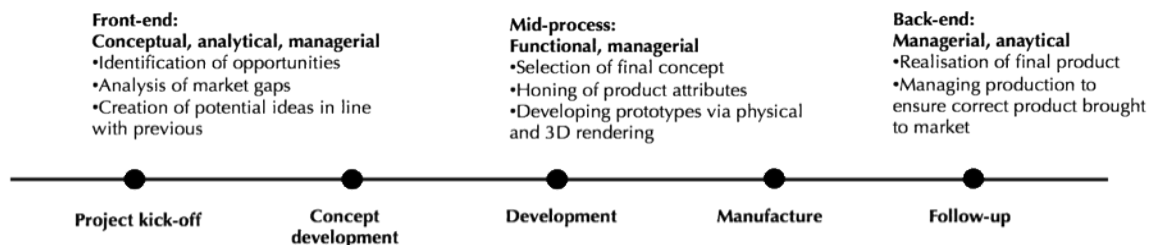
Source: the researcher

The findings indicate that the expansion, reach and magnitude of the input, involvement and roles adopted by designers are unambiguous. This enlarged remit and responsibility allows for designers to have greater involvement, and to take greater control – leadership – of NPD. Designer leadership, in this sense, is not hegemonic or domineering; rather, designers are taking a greater ownership of the direction of NPD. While the designer's wearing of many 'hats' at the one time can sometimes bring an ambiguity in partnership with the client, for the most part, the designer is becoming an

authority in decisions beyond the traditional remit, and this creates a new symbiosis with the client. An increasing trust allows the designer to guide the client as to the 'best' strategic decisions for the brand, and in doing so, the designer is able to lead the client across the NPD process.

6.4 Finding 2: Interface of designer and client

The second theme concerns the interface of designer and client. The evidence built in Evidence Table 2 finds that at Design Partners, the designer–client relationship is instrumental in project progress and design outcomes. Building and nurturing of relationships becomes an essential aspect of the designer's role. Sometimes the relationship can become problematic, especially where the extent of authority exercised by the designer in the NPD process is concerned. Therefore, management of relationships is a core component of the work of the design consultancy. This section, based on the data from Evidence Table 2, examines a range of relationships between Design Partners and its clients.

6.4.1 Design Partners' current clients

Design Partners has a number of international and local clients who are mostly engaged in continuous, incremental product development in mature product categories. The consultancy has particular expertise in consumer electronics and homeware categories. At the time of the fieldwork, ongoing projects were diverse; for example, a baby scoop for use in powdered milk formula (client: Clevamama), an electronic pill dispenser, a water cooling tower for use in offices (Aqueduct), a lit emergency exit sign for building interiors (Profile), a universal remote control (Logitech), a computer mouse (Logitech), a computer keyboard (Logitech), a gaming keyboard (Logitech), and electronic bathroom scales (Terraillon). Other projects were for Logitech and Terraillon, the consultancy's two key clients. Design Partners also has a number of clients whose projects occur on a more irregular basis; for example,

electronic gadgetry manufacturers HP, Palm and EPOS. Figure 6.6 shows a matrix of clients, arranged along two variables: (1) length of partnership with Design Partners and (2) company age.

Figure 6.6: Design Partners' main clients (2009)
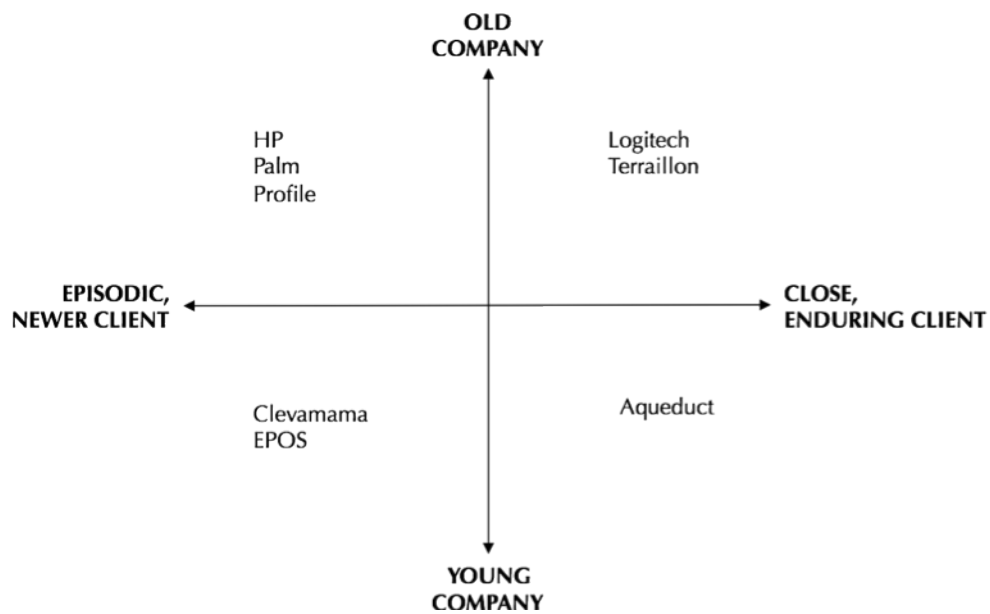
Logitech, a multinational computer peripherals manufacturer, is a key client of Design Partners. The firm is Swiss by origin, and retains its HQ in Romanel, near Geneva. Through a process of acquisition, it has developed a second base in Silicon Valley, California. Growth by acquisition means that the range of products in which Logitech specialises is diverse, and this strategy has left the company fragmented. It currently has eight business units all operating under different management. Decentralisation has resulted in a lack of clear product strategy, and the lack of a central head of design means that there is no unification in design language. It uses a range of consultancies to provide its product design, of which Design Partners is significant.

Design Partners has an enduring relationship with Logitech. The first successful project, won by pitch in the mid-1980s, was with the 'retail pointing devices' (RPDs – computer mice) business unit. The mouse's success encouraged repeat business, and then recommendation through word-of-mouth to other units in the mother company. The consultancy now works with a range of Logitech business units, designing mature products such as RPDs, keyboards, speakers, specialist gaming peripherals, remote controls, headphones and other computer accessories. A substantial proportion of Design Partners' revenue is currently generated by Logitech-related projects.

Another long-term partner of Design Partners is Terraillon, originally a French and now a Chinese-owned manufacturer of kitchen and bathroom scales, and other mature category kitchen products, such as kettles and filtration jugs. The company has had an unsettled history, having been bought and sold many times in France, the US, and now China. Despite the Terraillon–Design Partners relationship dating from the mid-1980s, Terraillon has yet to engage fully with design in its strategy. Its product strategy is fragmented: it uses other consultancies, and has in the past branded generic products bought in from the Far East. Terraillon's CEO is Irish, and the initial introduction and enduring close ties between the two firms arise in part from this connection.

6.4.2   Building bonds of commitment

The construction of positive, trusting client relations is actively encouraged by consultancy management. Design Partners' direct and trustworthy conduct means that relations are largely positive. This appears to have been crucial for the development of the firm from a small to medium-sized consultancy. New business coming into the studio from new clients arises from three main sources: (1) referral and positive word-of-mouth from previous and existing clients, (2) personnel of a client who had moved to another firm and re-contacts the consultancy on behalf of the new employer, and (3) personal connections of designers, for example through business networking.

Designers know of all members of client teams on a first-name basis. Names of personnel on the client side were bandied about the office, as though the partnership existed on a friendship basis, and signified familiarity across the consultancy. A senior

manager told me that the consultancy needs to see the bigger picture in order to navigate the project:

> 'In establishing the key relationship with the client, and there is a need to not necessarily just work with the immediate project team, there's a need to have a relationship with stakeholders – it might be the executives on the project side, it might be the director level on the client side' (DP9:1)

The enlargement of the sphere of influence happens for strategic reasons – where problems arise, it is necessary to have a point of contact above the immediate project team. More than one point of contact allowed the relationship to be maintained with the client firm after micro changes of team personnel. However, the findings show that it is the personal partnerships between the designer and lead client-side contact that are crucial. This friendly approach to doing business encouraged warm relations. A manager pointed out to me that the clients 'love' Design Partners for its approach:

> 'I just think there's this real warm, fuzzy approach to all our clients […] and they love us for it.' (DP7:14)

Unions of matrimony

This love was so important to Design Partners that designers compared it to spouses, and indeed it was nurtured in a similar way. The beginnings of such an association require cosseting in order to seal the contract. A senior designer compared the beginning of a relationship to 'courting':

> 'originally it was the kinda courtship interaction with him as a new client … really an exchange of emails and calls to endear him to us' (DP5:1)

The courtship period ended in a wedding – the signing of the first contract. Once this had been renewed several times, the relationship became even closer. The MD referred to these as 'marriages' in an attempt to explain why Design Partners has few 'flings':

> 'we're very good at marriages, and not so good at serial lovers, if you know what I mean – so we're very good at doing that with a small number of people. And it's a hard thing to do – it's hard to be married to lots of people' (DP11:1)

In a way this illustrates the symbiosis that Design Partners has with its key clients. For example, a senior designer was dispatched for a 10-day business trip to China, with the purpose of visiting manufacturing vendors with the Hong Kong-based client. On his return, he told me that the vendor visits were complete in just two days, and that he could feasibly have returned at that point. Instead, the remainder of the allocated time was simply for the purpose of 'wooing' a new incumbent on the client-side team.

Two senior designers mentioned instances where having personal connections to clients generated new business opportunities. In one case, the movement of client personnel to another employer resulted in the engagement of Design Partners for the new company. Likewise, another senior designer described that networking and acquiring a lot of 'friends' has led to new projects for the practice on several occasions:

> 'I have quickly found that the best way of getting a lot of new business is making a lot of friends. And we've gotten two or three things now which is just because I was friends with somebody' (DP5:8)

Likewise, personal disdain can lose contracts. There was evidence to suggest that personalities within client firms can take an intense dislike to suppliers. One such case occurred during a business trip abroad. The tale was retold several times by management on return to the studio, including once at a company-wide meeting, suggesting sensitivity to being 'disliked'. The story concerned a middle manager ('Bob') at a US-based client who had taken a dislike to Design Partners for unknown reasons, and so hired another consultancy for a new project. Bob's immediate superior was, in contrast, a fan of Design Partners. When the new product designed by the competing consultancy bombed on the market place, Bob was nearly sacked by his superior for this failure. His dislike for Design Partners therefore intensified, and his boss immediately rehired the consultancy to 'repair' the work of the competing consultancy. The MD quoted Bob as saying:

> 'if a product is successful it's in spite of Design Partners, if it's a failure it's because of Design Partners'

Personalities and personal bonding, therefore, played an important strategic role for the consultancy at three levels: (1) the developing of a new client base, (2) the wooing of existing clients for repeat business, and (3) when orchestrating an appropriate team make-up for projects.

6.4.3 Personal bonds as influencers of NPD progress

Bonding is as important for the design process as it is for strategic business development reasons, and designers regularly linked relations with clients to project progress. There was favourite client-side staff with whom designers were desperate to work. At a company meeting, one senior designer remarked of a favourite project manager: 'we'll work on any project that the project manager is xxxx' (case diary, 18/4).

Similarly, designers are often selected to lead projects based on personal attributes and how these relate to the individuals on the client side, rather than for specific design expertise. Designers acknowledged the strategic aspect of building close ties. A junior designer noted that he became the key point of contact, and eventually manager, for one product portfolio (gaming hardware) because he had an interest in, background in and therefore special insight into the area:

> '… I think suited my design style because I was quite young, I'm a little bit extreme in the way I sketch, my style, maybe a little bit more aggressive because that's what I was into at the time … I built up a great relationship with the client, and because I knew the lingo, I knew the games, I played the games they played.' (DP2:2)

This background and genuine interest helped in building a bond with the client, who was of a similar demographic, and had the same interests. The junior designer commented that older, more experienced designers could not have formed the same rapport:

> 'I remember I was going out for dinner one evening with the gaming crew – they were here – it was me, maybe two of the directors, xxxx and xxxx, and xxxx, and they started talking about games, and the rest of them went quiet and I was able to pipe up and say "oh yeah *Quake*! I played that back in the day! Do you remember *Sim City*?"!' (DP2:2)

Designers described the best types of design situations as those where client relationships are so close that a genuine rapport develops between the individuals. In conversation, a senior designer told me that he regards a client with whom he has worked the past five years as more of a 'friend'. Designer and client share a history,

having 'cut our teeth on the same project' (case diary 30/3). Similarly, another senior designer told me that he liked and trusted the individuals on the other end of the telephone, and regarded this as important because of the intensity of collaboration and communication. At the same time, however, he was wise to his naivety in holding a business acquaintance in such regard:

> 'They recruit very well, I think, pretty decent people working for them by and large. I know from a business point of view it's not the way to be talking about it, but it's the way I like it, to build up a working relationship – it gets intense, some of the relationships you're onto them every day, so you get to know them pretty well, so having nice people helps' (DP3:4)

While wariness might be advisable, it was rare. Intensity of relationship has the capability to blur the boundaries between design teams and client teams. A senior designer described the best type of situation as one where the designer and client are so close that designers work almost as an in-house resource of the client firm:

> 'if you've built a really good relationship with somebody well then you're able to do that, you can kinda work with them, as a team. It's not so much that you're working for them, or consulting for them, but you're working with them. That's the best situation' (DP5:10)

Short-term and long-term relationships were described in the literature review as having both advantages and pitfalls (section 4.4). A major barrier to establishing long-term relationships is client secrecy for reasons of confidentiality, especially where the consultancy also works with competitors. However, at Design Partners there appeared to be few issues of secrecy between client and consultancy. Ironically, it appeared that the fragmented nature of the key clients resulted in more issues of secrecy internally between personnel and departments within the client. For example, I attended a conference call where a senior designer was presenting a new product idea to his contact (a global product manager). After the presentation, the client was extremely enthusiastic about the idea. The following day, however, he was going on holiday for three weeks. The designer was asked to keep the idea 'under your hat' until his return (case diary, 2/4). Presumably, the client wanted to be the bearer of good news to his seniors.

Smooth relationships = smooth projects

This type of symbiotic working relationship was also considered to alter the course of the product development process. A junior designer described in a positive way his feeling that the client was part of the design team, 'one of us':

> 'And that's what's really cool about the xxxx team, they're like one of us, someone that you ring and go 'hey, how's it going, haven't spoken to you in a while', and it's usually a catch-up. And then we go into business rather than go "So did you have a good day, anyway … down to business" [laughs]' (DP2:4)

This kind of close relationship impacts on design outcomes. The same junior designer also commented that, by having great rapport, he felt comfortable communicating with the client, was at ease with the client company, and could therefore better understand the required design language. Ultimately this led to the ability to exert greater control over the design process:

> 'I started really understanding it and taking control, and understanding the design language, for the gaming products, and building the rapport with the gaming guys, it just started flowing naturally. I could pick up the phone at any stage and call them if there was any issue.' (DP2:4)

Positive and trusting relationships were widely acknowledged as a key asset that assists in the smooth running of projects. In this paradigm, rapport and 'friendships' leverage better negotiation and, if required, hold sway over unfavourable decisions. For the designers, a smooth development process normally results in a 'better' product. A senior designer described to me the importance of building 'equity' and 'trust' with the parties with whom he works. This task was strategic – for him, the better the working relationship, the better was the resultant product:

> 'you need to build up an equity and a trust with the person you're working with. So we're talking about a marketing person. You build up equity and trust by working with someone first of all, and for it to be a good and successful experience for them, then the next time you have more equity and more trust. And the more trust you have, and the better the working relationship – in a way the more intimate the working relationship is, the better. And the product will probably benefit for it too' (DP6:5)

Ultimately it is the designers' personal drive to design better products that underpins the strategic use of friendship formation. Since designers are passionate and care deeply about the products they create (see section 6.3.5), it is easy to see why such worth is attached to perfecting the process that can lead to better products. Where a

designer can wrest greater control over the development of a product, it turns out more closely aligned to their original specification, and by default becomes a product of which they can be proud.

Making friends versus making money

While better design will enhance the reputation of the consultancy, for example through awards, referrals, press coverage, and client satisfaction with product success, there is a flipside. The 'softly softly' approach highlights a weakness in Design Partners' business philosophy. Designers and managers are caught between perceptions of the client as a 'friend' and as part of their design team, versus visions of the client as an employer and formal business relation of the consultancy. The paradox – making friends versus making money – is a distinctive characteristic of the Design Partners business philosophy.

Designers are evidently passionate, and care deeply about their work. Moreover, they have deep-rooted personal, ethical, moral and professional codes of conduct to uphold, and sometimes have difficulty in resolving these in the commercial context. For one manager who had experience of working in a non-design organisation, the Design Partners approach was remarkable. He described his personal experience in dealing, on behalf of the non-design corporation, with cutthroat design consultancies that squeezed every last penny from clients:

> 'when I worked in xxxx, every time I asked an agency for another file, and it had to be sent to you or whatever, you got charged a grand or 1,500 to compress that again, or FTP [file transfer protocol] it, you just got charged for everything, but we don't do that' (DP7:14)

The manager described how the Design Partners ethos went against exploitation of clients. Asking for extra money for work was 'pulling the piss', and would tarnish the 'nice, gentle', warm and fuzzy approach of the consultancy:

> 'you can't say, "that'll be an extra 10 thousand" in a nice, gentle way … and it's just a half-an-hour, but it's just a simple, menial task, or it's an hour, whereas another agency would charge nearly a full day's work for it, and kinda pull the piss' (DP7:14)

This considerate, honourable and respectful approach exposed a sense of ambiguity within Design Partners – that design was selling (see section 6.3.1) was regularly reinforced by management at company meetings, and designers had an innate understanding of business, often mimicking the language and craft of the marketer. Yet Design Partners' discomfort in asserting itself with clients is plain. Where deference was extreme, an asymmetrical relationship with key clients was exposed and was often the source of internal tension.

6.4.4 Consultancy–client symbiosis

As an authority in the design process, the consultancy is beginning to win a greater degree of NPD ownership, as well as shaping the overall client firm strategy. A senior designer disclosed that how the design process dialogue unfolds has changed the client firm's strategy:

> 'well I think the way we work has influenced their PLC [product lifecycle] process, you know what I mean. So the fact that we do tend to start off getting the core ingredients, discussing the core ingredients, I think that's probably fuelled some of their process which they have firmed up less than a year ago' (DP3:2)

The symbiosis is built by having enduring and open partnerships with the client, and is a by-product of the consultancy's honest approach to doing business. A manager described the differing approaches in NPD when the client is new and existing. With a new client, efficiency and effectiveness are paramount, while with an existing client, trust has already been established:

> 'those foundations are built years before in the overall relationship with the client. With a new client, it's probably making sure you're there for all the meetings, and you get on the phone if there's any open questions at all in your head about the brief, talk to the client … so with an existing client, if you like, some of our work is already done, and you can cut to the priorities and the nub of the issue that little bit quicker. But they're actually giving us the work because they know that we've been somewhat aligned with them. Whereas with a new client, it's all about establishing that "yes, we are listening", "yes, we are on the same wavelength with you"' (DP9:6)

The honest approach to doing business is continued by Design Partners throughout the NPD process. By following-up on completed projects, the consultancy builds trust and enduring partnerships. A junior designer compared the nurturing approach of the

consultancy to those where he had completed internships whose work finished after production:

> 'here we're very, very close to the client, and the fact that we follow the product almost until the production. I've worked before for some companies, like for my first internship was in an agency, and some projects were just "ok, here is a good design, that's your product, you do whatever you want after"' (DP1:9)

By nurturing the bond and the product, by ensuring satisfaction post-launch, designers enhance their ownership of the process and its outcome, while also encouraging repeat business.

6.4.5 Asymmetry in client–designer relationships

Deference undoubtedly arises from the consultancy's tendency to form 'marriages' rather than to have short-lived flings. Reliance on a small number of enduring and important clients means that losing one could spell disaster for the consultancy. Therefore, the utmost is done to keep these clients happy, sometimes to the consultancy's inconvenience.

First, asymmetry is evident in terms of communication. Designers are always available to clients, despite the majority being based in another country, or even another continent. Designers maintain regular contact with clients outside of deadline periods and review meetings, the aim of which is transparency and the smooth running of projects by ensuring everyone is kept informed. During the working day, designers are constantly on an IM (instant messenger) service accessible to clients, and use this for small-matter communications. Conference calls were regular in the office, and Ireland-based clients can drop in to the studio to check the latest progress. Trips abroad are frequent, although they are being somewhat curbed in the recessionary climate.

However, this constant communication is not wholly welcome. A senior manager divulged that ease and intensity of communication is a double-edged sword for the profession. He connected the incessant contact and updating of clients via email to the generation of extra work:

> 'email is something that, it becomes a real habit. And you almost generate work, just because you're emailing – you can contact people day to day to day to day' (DP9:13)

While this generation of administration duties detracts from time spent on design-related activities (as discussed later), it also impacts on relationship quality. One manager described negative associations linked to being party to confidential, client-based information. Unlike those situations where designers described closeness to client as aiding the development process, for managers, being treated as an in-house resource, where communication was free flowing, was akin to being 'taken for granted':

> 'at times we can be really taken for granted. And there's stuff being said that you should really only say to Bob who works on the 5th floor, y'know internally within your own company, but it's said to another external agency that isn't – really we shouldn't be constantly on mobile contact and IM and drop all other clients … you know I think it's something that we have to bear in mind' (DP7:13)

Second, project deadlines are an area in which Design Partners pandered to client requests. Untenable deadlines are agreed to regularly, and result in designers working into the night on many occasions. A senior manager snapped his fingers to express how quickly the client expects reaction time to be. The same senior manager commented that clients do not always realise that the consultancy has other work on at the same time. Dealing with these clients sometimes meant juggling schedules and work for other clients to keep the first client happy:

> 'Clients do not think that you are working for anybody else. They just say "well, there's two weeks' work so we are going to give you the data now, so why can't you have it in two weeks' time?" And then your balance is … and sometimes you have to just say – even although we are not very good at it – "no, we can't do it" because there is always a possibility that they will be going "well they aren't flexible, they aren't committed, they're overstretched" etc. etc.' (DP10:16–17)

Management walk a tightrope in balancing the requirements of individual clients and the work of the consultancy as a whole. While wanting to satisfy all parties, at the same time there was a need for greater distance in order to engender the consultancy's professional image as that of a design *authority* with which the client is eager to work.

However, the relationship is perhaps less asymmetric than management perceive it to be, and maybe too much effort is expended in trying to satisfy even the most dominant of clients. One particularly perceptive manager pointed out that an enduring

relationship is dyadic: the client needs Design Partners as much as the opposite is true. The influence that Design Partners has exerted on the key clients' design language is profound. This influence, combined with trust built incrementally over more than 20 years of collaboration, is difficult to replicate:

> '[we have] such a history together, and [they] are our main client. I think they know it, obviously. It's weird though, because they have such a dependence on us as well, which'd take them a long time to build up again' (DP7:13)

6.4.6 Design project briefing

Design briefs vary by client, and are linked to the type of relationship nurtured between client and designer. In general, the longer the relationship had endured, the looser the brief. Old and new clients differed in their approach to briefing. Where the relationship was long and intense, clients presume that designers understand exactly what is required. In contrast, new clients can be too stringent in what they ask for. According to the MD, both types of brief are flawed, yet he upheld that this stage is crucial to the rest of the development process:

> 'there's nothing more important than a good brief. Not too tight, not too presumptive, you know, still allowing room for innovation and ideas, but very empowering but clear, especially clear about the target market, and the objectives of the project, and what success looks like, things like that' (DP11:2–3)

Briefing is often a source of frustration for designers: having built up long-term relationships, clients expect designers to understand exactly what is required in new products. While at one level it allowed for Design Partners to take control of the NPD process (as explained in the following section), it can leave designers frustrated and grappling for the marketing 'story' around the product. With established clients, briefs are sometimes so informal that they do not even constitute a written document. Instructions can be manifested in a telephone conversation, a conference call, or during an aside at a meeting. At an internal strategy meeting I attended, it was clear that this intimacy in relationship was a source of tension also where design briefing is concerned. A senior designer described the brief as hinging on relationship closeness:

> 'a brief is more than just a written document – it's also a relationship with the client on the phone' (case diary 23/4)

Clarity and agreement between the client and designer are vital for a smooth-running project. Again, communication is required to ensure that everyone sings from the same 'hymn sheet'. A senior designer described achieving this through frank and open discussions with the client. These foundations made for an 'easier' project:

> 'what we try to do always is talk to the client, open up a discussion as to who we are actually aiming this for, what is their motivation for buying it, how does it relate to the brand. Get all that agreed so we're all talking off the same hymn sheet. And then once we know that, it makes it so much easier for the rest of the project' (DP3:2)

Communication therefore facilitates a better design process. Where the information transmitted is incomplete, designers are frustrated since it means that the starting point is vague, and the final product ultimately suffers for it. Designers considered having 'full' information absolutely necessary at the briefing stage since it allowed them to build a 'story' around the product. For one senior design, an ideal brief contains constraints, product specifications, and information on users. Receiving this type of brief, however, was a rare occurrence:

> 'You have a bigger complete story. So you need to think about the user, the constraints, and the specification. And if you had the marketing vision for the product, that would be ideal. You don't always get those. You rarely get them in fact' (DP6:3)

This lack of client effort to write briefs was noted several times. Another senior designer said of his client that the same brief is regurgitated time and time again by use of the 'copy and paste' function:

> 'they have a habit of when they write briefs to cut and paste from an old brief' (DP3:2)

It is somewhat revealing that the approach of the client, a multinational corporation in this case, can be so lax when conceiving new products (as covered in 6.3.7, 'I'll know it when I see it' syndrome). This laid-back attitude can, however, again be explained by the trusting bonds built between designer and client over the course of several successful collaborations. Where relationships are enduring, designers are extremely familiar with the client, the company and the brand – projects are often simply updates and redesigns of previous products completed by the same designers. A senior designer explained that this is why briefs were short:

> 'well because there's a long history of Design Partners working with xxxx, the briefs tend to be short and to the point because it's usually the next generation of a xxxx or a xxxx … they assume that we understand what they are trying to do' (DP4:1)

Taking this incremental knowledge accrual to another level entirely, in some instances, the designers are even more familiar with the brand than the clients themselves, having constructed its visual identity. One senior designer even described situations where Design Partners write the briefs for clients, and send these on for 'vetting':

> 'with us, it's "once more with feeling" … even to the point that we're writing the brief ourselves, and getting it vetted by the client' (DP4:10)

Relationships, especially those that endure, are therefore mutually rewarding. At managerial level, this level of symbiosis again gives rise to a conflict of interests. While the lack of briefing formality enables designers to seize greater ownership of the product development process, at the same time the informal bonds impact on the consultancy's business effectiveness. Intimacy of paradoxical 'business friendships' has the potential to result in designers taking on work for which no formal budget had been agreed. To avoid being taken advantage of, it is again necessary for management to warn staff not to commence work that lacks formally agreed budgets. At a company-wide meeting, the MD told designers:

> 'if a project doesn't have a brief, then it's not a project' (case diary, 23/4)

Here, the weakness in the consultancy's business ethos – the inability to separate the client as friend versus client as employer – is once more exposed. Designers straddle relationship ambiguities, mixing business and personal relations. Even at the earliest briefing stages of a project, management and designers alike have difficulty navigating the boundaries between intimate client–designer relations and formal business dealings.

Impact of a long-term relationship

Relationships are tailor-made between client and designer. When positive, the external design resource can become so close to the client firm that it is treated almost as an in-

house resource. Inter-reliance develops between the client and consultancy firms. Likewise, the client–designer history – an intimacy built over a number of years or projects – is key for the design effort, and becomes advantageous for brand development. With enduring Design Partners clients, designers said that it was crucial that each project built on the previous. This was the same for generational products, such as the computer keyboard work undertaken for Logitech, or through a 'family' line. In doing this, business-aware designers took extra responsibility in ensuring that each project helped the brand-building process. The enlarged commercial context was important for designers. A senior designer suggested that the history of relationship, along with a knowledge of the history of the client's brand and company, are key for ensuring that products are continually moving forward:

> 'It's all very well starting with a blank piece of paper, but there's a history which you have to respect, certainly I would respect as a designer – I think there's a few different projects that I worked on for different brands, I've always tried to have this sense of evolution, going forward' (DP3:5)

6.4.7 Designer–client tension

Relations with clients, even with those long-lived partners, are not always plain sailing. Tensions often arise from designers' intense passion for their work (see section 6.3.5), and the clients' ambiguity in perceiving Design Partners as in-house or external. The strength of designer passion – the quest for the creation of 'better' products, and personal, deep-rooted ideals – has the capacity to cause conflict with clients. Client requests that collide with designers' ideas of design outcomes give rise to debate and sometimes conflict. I attended a concept presentation via conference call led by a design manager. The client had approved the concept on a previous call, and the purpose was to present the next stage of development to the immediate client and his superior. The superior was not convinced, and asked for further work. At the end of the call, the design manager admitted to me disappointment and frustration that the 'head honcho' had not been taken on board. The client-side disorganisation meant time setback. Weeks later, in interview, he referred again to this call. He told me that, through experience, he had learned not to voice his discontent to the client. 'Fighting' a client for an idea, he said, could go down like a lead balloon:

'I was very disappointed on the call, but I couldn't show it in any way, and that would have been the immature me a couple of years ago, I would have kinda fought for it, and some of the senior designers would still fight a little bit for it, but I think that can go down quite badly with them' (DP7:5)

Where disagreement on design requirements does arise, the closeness of designer–client bond can affect the extent to which the designer can fight for the idea. Here, the designer uses the relationship equity to challenge the client. Final product quality, therefore, hinges on the ability to build a good working relationship with the client holding the purse strings. A junior designer described witnessing the closeness of the relationship between a colleague and his client. The bond enabled the designer to challenge client decisions 'aggressively'. The designer was loath to see a 'bad' decision ruin the work he had already done, hence personal conviction again drove the quest to have the best possible product manufactured:

'with some people, you can be more forceful. XXXX has a really good relationship with the xxxx team, and I've heard him on conference calls or in meetings almost aggressively saying "guys, if you change this, you're going to have a really bad product, what are you doing? Open your eyes!" and being that forward because he gets on really well with them, he can be really blunt because he gets on well. And he gets his point across, and he believes in his point as well. I think having a relationship with a client is important, really important, if you want to say something like that' (DP2:13)

Where, in the designer's view, client decisions jeopardise the quality of the final product, relationship equity can affect who wins. However, despite all the emotional connection to products, designers are under no illusions that the purpose of their job is anything other than the creation of products that exist in connection with a range of contexts. Designers do not consider themselves artists, and were tuned-in to the needs of the users for whom they were designing. Moreover, they regularly acknowledged the business world, and indeed regularly adopted the language and craft of the marketer (section 6.1). As such, business was critical: making products desirable on the market was key.

However, resolving the conflict between individual beliefs and client requests often appeared to trouble the designer. Designers can become jaded about the reasons underpinning client decisions. A senior designer appeared resigned to the disjunction between designer and client views. For reasons such as 'commercial realities', he told me that the client occasionally prevented 'good' products from being launched:

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> 'sometimes we're not allowed to turn out the products – sometimes our clients don't let us turn out the products that we should turn out. That happens sometimes, that's reality – there's commercial realities and all sorts of realities that can stop a good product – that's it at the end of the day' (DP6:8)

So while at one level, the constructed client relationship affects product outcomes, ambiguity of role again exposes a layer of conflict, tension and paradox underlying how the designer perceives his task. The designer: (1) is unsure quite how far he can and should manipulate these relationships, (2) is caught between micro and macro motivations for challenging the client, and (3) is charged with balancing the needs of the client along with a range of other stakeholders. The job is fraught with compromise.

6.4.8 A tension in autonomy versus control

As it transitions, and designers take a greater ownership of NPD, Design Partners has increased its offering to provide a range of expertise to clients: 'blue sky' conceptual work, market research, business strategy and direction, design development, project management, prototyping and modelling, as well as assisting in bringing the product to manufacture. In doing so, the consultancy is at once a service provider and a design authority. There is no clear limit to the services provided: for some clients, the consultancy has even provided brand development expertise.

As such, the type of expertise asked of the consultancy varies by client. Where partnerships are enduring, it is more likely that the designers are engaged in strategic work from an early stage of product development, having already assisted in building the visual identity over the course of many previous projects. For newer clients, involvement is probably more limited to the provision of a service. The level of designer autonomy therefore also varies significantly. While full and complete creative freedom is rare, mutual trust and respect between designer and client is a precursor to increased autonomy. A manager told me that this was the case with one particular client–designer team. He described this client as 'brilliant' because of the trust in the capabilities of the designer:

> 'they are a huge fan of him and a huge fan of the [product] that our department makes, and they give him nearly 100% creative freedom. They're brilliant, brilliant people

because they know that they're specialists in what they do, and they know that we're specialists in what we do' (DP7:6)

However, where relationship length and success does not lead to an increased autonomy or involvement, designers report discontent. A junior designer described a 'bad' project where the client (marketing) was extremely precise in his instructions. The client was not 'happy' unless these were carried out to the letter – designers were providing a mere service:

> 'it was not an amazing project, because the marketing guy was very, very pushy in his ideas – so basically we were just his hands. And he was saying to us "ok hands, do that!" and we were just doing that, otherwise he was not happy' (DP1:9)

Trust in designers as experts had repercussions for the NPD process. While in some cases a fusion of design and client teams meant that designers assumed greater autonomy, in other cases respect was eroded as the designer moved quasi in-house. A senior manager described for me an instance where a client rejected advice offered by Design Partners. When a competitor subsequently seized the market using those ideas, the client back-peddled. The senior manager described himself and a senior designer sitting in a meeting with the client 'smiling' knowingly, almost resigned to their client's lack of conviction in their ideas:

> 'their competitor has just launched two colours that we said would be predominant. It was blindingly obvious, and they came out with some really muted colours, and their competitor came out with the burnt orange and the green story, and so now they're thinking of doing it, after us saying that "this is coming up", and myself and xxxx were just smiling … If they had gone with ours it would have been a success, but you may or may not have gotten it right. In this case they're saying they'll go on the back of what xxxx [competitor] have gone on' (DP10:23)

Trust, respect, and taking final decisions

As trends or opportunities may appear with a degree of clarity to the designer, a lack of client belief can prevent buy-in to a successful product. For designers, this is infuriating – I heard several anecdotes of idea proposals being met with resistance until a competitor seized the market. A senior designer compared the consultancy's reaction in these situations to 'biting your tongue'. The best policy is to keep a stiff upper lip and

carry out the task in hand. As much as a designer can justify advice, the final decision whether or not to take the advice of the supplier rests with the client:

> 'when you know the wrong thing to do, but you kind of bite your lip and do it. You can advise and say "listen, I don't think this is appropriate because of x, y and z, because of these reasons", but they may still do it. We have pretty good debates on these kinds of things – they respect our opinion but at the end of the day, we're a supplier. So we have to give them what they ask for' (DP3:8)

The relationship between Design Partners and its clients, like a husband and wife team, had in many cases become so familiar, close and symbiotic that there was almost an unwritten 'colleague-to-colleague' bond. In the words of the MD, Design Partners was like a 'comfortable pair of shoes': trustworthy and conservative, something on which the client could rely, and always there to fall back on:

> 'I think as a result of being open and transparent, we're like a very comfortable pair of shoes - maybe we've lost the secret sauce a little bit' (DP11:2)

The relationship – bond – fostered between the design consultancy and client is therefore crucial to project outcomes. Yet there also appears a difficulty for designers and their managers to navigate relationships which are extremely complex and multifaceted.

6.4.9 Conclusion: managing effective designer–client relationships

This theme unravels two perspectives on the designer–client relationship. First, a strategic aspect to the construction of these relationships has emerged, where the designer manoeuvres himself or herself into a position to be able to steer the client with the aim of realising a deep-rooted inner belief in producing better products. Second, sometimes a 'business friendship' type relationship over-develops, where the designer's respect for clients is such that it can be damaging for business effectiveness. Therefore, all relationships need effective management.

Relationships of varying closeness and intensity were observed, and the constellation of this relationship affects the consultancy's business approach. As Design Partners moves to offer greater strategic direction to clients, the partnership can become so close that

boundaries between client and design teams are blurred. Where the relationship became overbearing and ambiguous, the consultancy was left in a weakened position, obedient in fulfilling increasingly complex client requests.

Ultimately, the consultant–client relationship shapes the extent of designer involvement in product development. A variation in proximate and more distant partnerships indicates that in the most symbiotic situations, designers were empowered to take a greater ownership and involvement in the NPD process, as well as having input in shaping the client brand direction. 'Chemistry' therefore is a crucial enabler to designer NPD leadership, and management of relationships becomes another vital extension of the designer's role.

6.5   Finding 3: Changing business model at Design Partners

During the fieldwork, Design Partners was in an interesting time of transition. The evidence suggests that the consultancy is gradually gravitating to a focus on strategic and premeditated tasks. The new role constitutes greater business analysis, and 'getting into the skin' of the design problem from all angles – business and industry, the client brand perspective, societal influence and individual user context. This all-roundedness enables the consultancy to take a greater leadership role in the NPD process. This section is based on Evidence Table 3.

6.5.1   Reorientation in a challenging era

After the affluent years of growth during the Irish Celtic Tiger period (1995–2005), economic conditions became especially tough. Having previously been reliant on few, significant clients, management had recognised Design Partners' uncertain position as organisations cut back on design during the global recession. By consequence, a greater emphasis was being placed on the consultancy's business direction in an effort to survive, and even to grow.

This threat was being tackled head-on in the period prior to, and during, the fieldwork. This encompassed a re-focus on the acquisition of new contracts from new clients, and widening of expertise in a range of different industries and product categories. This was brought about in a number of ways. First, the creation of new posts, including a business development manager, meant a reshuffle of design personnel. Second, the MD and owner, an industrial designer by training, relinquished input in design projects in favour of management activities, and to that end enrolled on an executive business course. Third, project deliverables became more strategic and analytical. Fourth, a marketing intern from a business school was recruited. Finally, new design recruits were non-Irish, hired intentionally to bridge the geographical and cultural divide between design, marketing and manufacture.

Creation of strategic posts

Reorientation is most clearly demonstrated in the internal reshuffle of personnel to fill a selection of new, strategic roles. I was present to witness the announcement, during a company meeting, of three new job titles that were filled by existing, design-trained staff.

The first of these was the introduction of a 'design director'. This was filled by a trained industrial designer who also is on the consultancy board, and already fulfilled a management role. The second was the announcement of a new 'creative director' post. A senior designer and portfolio manager was promoted to oversee the design operations on a day-by-day basis. These positions are perhaps typical in a design consultancy, and signified an extra layer of hierarchy, but indicate a more strategic and holistic design direction for Design Partners. Organisation structure had previously rested on an operational project basis, portfolio managers overseeing juniors in mini, dynamic design teams. Figure 6.7 and Figure 6.8 compare the consultancy's organisation structure pre-2009 and post-2009.

Figure 6.7: Design Partners' organisation structure pre-2009
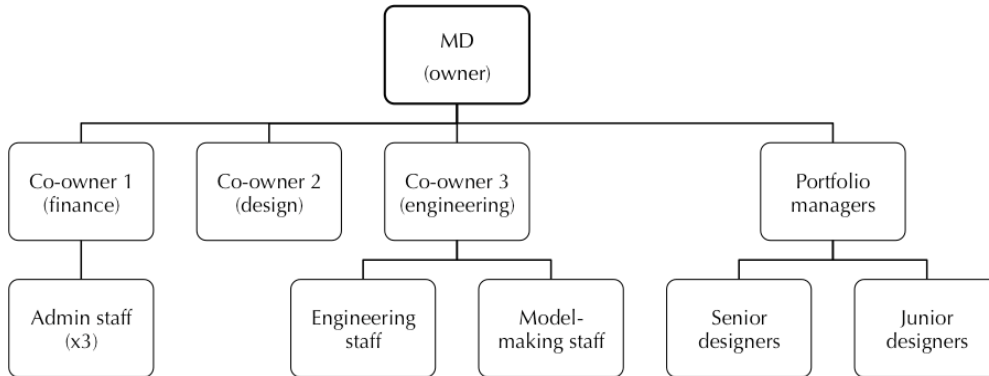
Source: the researcher

Figure 6.8: Design Partners' organisation structure post-2009
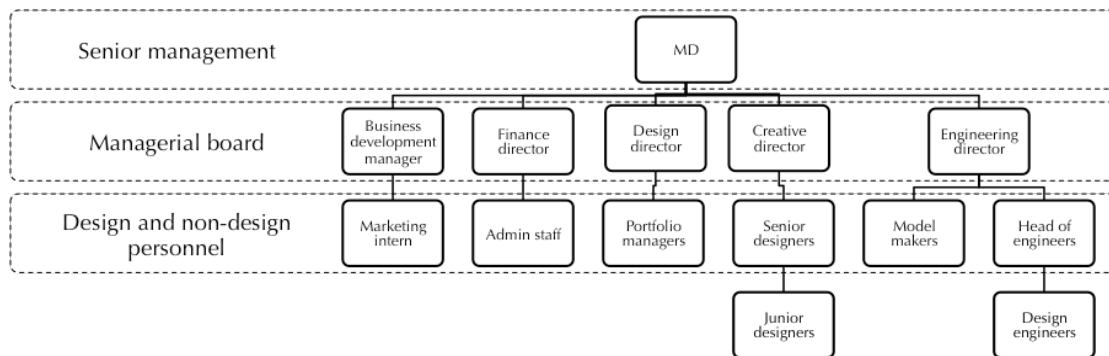
Source: the researcher

In interview, I asked the new appointees for clarification of the distinction between the roles of design director and creative director. The design director stressed a strategic element to his role, which mutes much of his participation at the operational level of projects. His role is to establish the project and its objectives by way of liaising and managing the wider design team:

'In establishing the key relationship with the client, there is a need to not necessarily just work with the immediate project team, there's a need to have a relationship with stakeholders – it might be the executives on the project side, it might be the director level on the client side. So a typical project might be run by a team of a marketing lead, and a design lead, and an engineering lead etc. etc. But there needs to be a directorial input coming from that team. So I would probably provide the ID directorial input' (DP9:1)

In this role, relationships are again of such crucial importance to the design process that the creation of the design director post merits a strategic and continual devotion to it. The creative director also adopts a strategic role in overseeing that each project marries with overall brand direction. In interview, the creative director described his new role as the building and development of the client's brand equity:

'I think that's the way we're moving as a consultancy, is to know the brands we're working with and know the people they're trying to sell their products to, and then to make propositions as to what we think will build their brand. And they trust us to do that. So it meant that over the last two years our work has been very focused on building their brand. And I have been kinda driving that, or policing it really' (DP4:2)

The design director and creative director roles are harmonised, both providing overall strategic guidance to the consultancy. The creative director used the analogy of an 'ice breaker' ship to describe the consultancy's work. He claimed that any consultancy must have two key components. Firstly, at the prow of the ship there is the deep, premeditated strategic design guidance proffered to guide the project and client. Secondly, in the engine room, there is the hands-on support network, enabling the practicalities of the strategic direction to be realised. These posts work at the prow, while managing operations in the engine room:

'A good consultancy needs to be like an ice breaker. By that I mean that an ice breaker is made of essentially two components – there's the prow of the ship which breaks the ice, and that's the blue skies work, the insight, giving direction to our clients – and behind the prow of the ship is the engine room, and the engine room is the support network that drives the machine forward, supports our clients, is a service provider, and actually does more work than anything. But the consultancy can't run without both components' (DP4:7)

The third of the newly introduced posts is a 'business development manager' (BDM). All staff being design trained, this meant the promotion of an industrial designer, also a portfolio manager, to look after the recruitment of new clients and securing of new contracts. This BDM is to spend 70% of his time on BDM activities, such as identifying

and researching potential clients, while the remainder is to be spent on design tasks. The BDM also manages a marketing intern, who handles the company website, undertakes market research, and deals with job applications on an administrative level. This intern is the first business-trained recruit.

6.5.2 Embracing design and communication technologies

The tools and communication methods now open to design have, in many ways, quickly changed the work of the designer. Design Partners, although based on the outskirts of Dublin, is able to compete on a global stage. Moreover, the design process and design's involvement in NPD have also changed significantly as a direct result. A manager succinctly described the impact of technology as manifesting in two distinct realms of the work of the designer: (1) in the tools of design, and (2) in communications:

> 'technologies are more complex, products and devices in general are more complex, whereas the way we work didn't necessarily change immediately to match that. The media that we use to resolve design has changed significantly, from fundamentally being paper on a drawing board, to computer. And the communication has changed dramatically, from telephone fax, to email IM, from intermittent communication, and probably more face-to-face, to probably more constant communication and less face-to-face' (DP9:13)

These two factors are now explored in the Design Partners context, and their impact on the consultancy's steps to take greater NPD ownership is examined.

Sophisticated technology = superficially sophisticated design results

Sketch board, tracing paper and pencil were the traditional tools of design. Over the past two decades, digital-based tools have become necessary to compete profitably. An increasingly 'fast and furious' approach to design is fuelled by sophisticated production technologies, along with the internet as a source of research and ideas. With the trend for customer co-creation, the internet has evolved to become a crucial source of research and ideas for organisations. Nokia, for example, has an 'innovation' feedback function on its website enabling users to send their ideas to the company. Upon

clicking 'submit', users are signing over all intellectual property to Nokia. Rising open-source, user-generated content websites (e.g. YouTube, Wikipedia and Flickr) are becoming tools tapped by designers for inspiration. The trend predictably meets with a degree of resistance from established designers. Finnish architect Juhani Pallasmaa, for example, argues that the role of the body, the senses and the hand of the designer have become disconnected from the process of architectural design, which is inherently physical (Pallasmaa, 2009).

The impact of these digital trends on Design Partners is palpable. A senior designer lamented the days of a more considered, more thoughtful and slower approach to design. Its loss is personified in the approach of the younger junior designers working with him, whose reliance on Google as a first port of call on projects was not desirable:

> 'I certainly try to use a media that is compatible or appropriate with what I'm trying to communicate at the time. So I'm trying to instil in some of the juniors working on my team is not always to go straight to the computer. It seems to be kinda a generation thing – people coming out of college now seem to work on screen, and they go straight onto Google, straight onto doing some layouts … and that's fair enough a lot of the time, or maybe it's more going in too soon. Maybe we should sit back and talk about it' (DP3:13)

Perhaps idealistic in sentiment, the clients' desired speed to market and the available tools make the slow approach unfeasible and redundant in modern-day consultancy. Software available for rendering product ideas realistically and in 3D – for example, *CAD*, *Photoshop*, *Illustrator*, *Coreldraw*, *Flash* – is so sophisticated that impressive results can be achieved in hours, compared with the same quality taking several days to complete in yesteryear. Even manufacturing details are captured precisely and quickly using *CAM*, *Rhino* and *ProEngineer*. At one Design Partners concept meeting I attended, of six presented ideas, four were discussed and dismissed, and the other two were taken away for further consideration by the client. The lead designer confided that one of those two concepts had been conceived only the evening before and rendered within hours. Interestingly, it was this idea that was finally selected. Software can enable the best ideas to come to fruition quickly.

Concepts can be rendered to a high professional level visually, yet can simultaneously lack in terms of all the other factors considered by designers; for example, values and reflective meaning, users and functionality, production and sustainability, or client and

economy. The software to enable a high degree of finish is cheap and easy to obtain. For one manager, a day's work could be made to look like a far greater achievement:

> 'What you communicated in the past was somehow, looked like a day's work, whereas what you communicate now can seem – there's no correlation there, and then it's constant' (DP9:13)

The sophistication of tooling contributes to the proliferation of small consultancies, and means that anyone can claim to be a 'designer'. However, superficially astute ideas can lack the inner depth on which the designer bases his work, and professionally speaking, there is no shortcut to the design process.

Intensification of communications

The ease and speed by which presentations and renderings could be superficially finished contributed to the dynamic, rapid nature of the profession, and also to NPD, with its ever shortening PLCs, time to market, and hence design deadlines. Designers are dogmatic during projects regarding timelines. This is reflective of the businesslike approach of the consultancy. While in some ways it veers towards the pragmatic and serious, 'left-brain' aspect of its business, it marries this with right-brain, designer-dominant creativity. A senior designer described the necessity of capacity to meld both sides, which sometimes could frustrate those who veered towards pure creativity. However, the business of design consultancy means that, at the consultancy, the wearing of a 'creative hat' was entirely unfeasible under tight PLC pressures:

> 'as a project moves on, it is important to get more disciplined, and for some clients, getting the product to market can be the most important thing! Getting a product to the market on time and earning revenue can be the most important thing, and that's just the way it is. Being organised and on budget for sure. It's hard to balance it, and some designers are biased more towards the other, or totally one – but it's a difficult act. Because if you want to be just with your creative hat on, you'd say "leave me sitting under my tree till the best idea comes" and however long that will be I don't know' (DP6:9–10)

Meeting agreed deadlines is crucial both for client timelines and for the consultancy's reputation. Timelines are generally tight, and communications have become intense and frequent. This results in designers continually presenting work to the client during a project's progression. Conference calls, IM conversations, emails and phone calls were

dyadic and unrelenting. Despite this dialogue contributing to the openness and transparency of the consultancy's approach to business, designers mentioned this being a particularly tough aspect of their role. A senior manager lamented the new ease of communication between the consultancy and its clients. In his view, the frequency of communication diluted the authority and standing of the consultancy. Continually seeking feedback fits a service-providing role, where client acts as a supervisor, but for the firm as an authoritative consultancy, the approach was unhelpful for the project's progression:

> 'You might say we get too caught up in it, we allow ourselves to get too caught up in it, because technology allows us to, and maybe there is a need to stand back and offer a different type of service, which is "tell us what your problem is, we'll see you in x number of days" and really the communication in between is not helpful' (DP9:14)

The unrelenting communication means that the portion of time set aside for enhancing relationships subtracts from the time spent on 'design' tasks. These 'extra' duties are as much a part of the role as design tasks. Demands of designers are generally considered more intense than in the past. Nascent concepts could be presented immediately, and this was evident during the fieldwork period. As an example, I attended such an occasion while in the field: an idea that had been conceived on a Wednesday was presented in a conference call the following Monday which included an impressive short film of renderings and moving images.

However, the extra burden on the consultancy is palpable (section 6.4.5 on relationship asymmetry). The need for constant dyadic communication was excessive. For an expert design consultancy, client trust in a project's progression is preferable to constant supervision.

Impact on deadlines and project management

Increasingly sophisticated communications have particular repercussions for the dynamic approaches and shortening PLCs of modern-day NPD. Deadlines do not allow for perfectionism, and the romantic donning of the 'creative hat'. Despite having the tools and communication technologies, working quickly sometimes compromises

design meticulousness, especially since designers themselves cope with project management. Correctly estimating and meeting agreed deadlines are crucial aspects of the job. Compromise of design ideals was not always welcome, and so adhering to deadlines becomes troublesome. A manager described having to supervise a designer who continually failed to meet deadlines. This designer had left the consultancy prior to the fieldwork, and is not considered favourably. That budgets were agreed precisely meant that her running over deadlines, and her wearing of the 'creative hat', was untenable. He described a situation of stress when she went over budget, and the dilemma this left for management:

> *Manager*: 'I would do the estimates, and I know how long things take from working in the areas myself enough, and knowing the skill level of people in the team or myself, em, but if I didn't I would definitely just go and say "how long do you think ?" and I'd do that with xxxx when she was here all last year, "how long do you think it takes?" and she was just legendary for underestimating because she wanted to please, but then it'd be like "oh my God, I've gone over by twice' or whatnot, and then I'd have to manage that with xxxx or whoever'
> *Interviewer*: 'so what would happen in that situation?'
> *Manager*: 'it'd blow the whole budget because it's so tight that … that it is such a knock-on effect and I'd have to manage that whole house of cards' (DP7:7)

The designer's design work has repercussions in a range of other areas, and so capabilities are broadened to include project management amongst others. However, this example illustrates how training in these areas is often inadequate to cope with an extended type of NPD involvement.

6.5.3 Migrating focus from practical hands-on support towards strategic consulting

Another major external threat posed to the consultancy is that of labour and developing expertise in Asia. Manufacturing capabilities in the Far East have already surpassed those in the UK and Ireland. Costs, ease and quality of skills mean that manufacture in developing countries is the most attractive option for most firms. However, Asian manufacturing companies are building design skills into the offering. Design is increasingly being sold by manufacturers as an added extra service, and design expertise is being embedded within these manufacturing organisations. These firms finalise contracts with Western clients on the basis of costs of manufacture, with design

being 'thrown in' to the package. Moreover, the increasing numbers of design graduates in China – 10,000 per year – from an array of 400 different courses (Hempel, 2006) indicates growth in levels of expertise in the Far East.

The linkage between design and manufacturing firms is also transferring into Western design firms. As noted in section 4.3, IDEO and frog were both acquired by manufacturing firms, Steelcase and Flextronic respectively. Interestingly, both now market themselves as multidisciplinary innovation consultancies, and along with Designworks USA – a subsidiary of BMW – form the three largest design consultancies in the world.

Design Partners has, since its birth, invested heavily in its on-site workshop facilities. It houses CNC machinery, sophisticated 3D scanning hardware, lathes, wood, metal and plastics forming facilities, and a spray-painting booth. This has meant that prototypes and, later in the process, 'photo models' (non-functional models painted to replicate the finished product exactly) were made on-site. Indeed, the consultancy employs four skilled model-making staff. Moreover, the designers themselves spend a considerable, albeit decreasing, portion of time engaged in hand work; for example, sculpting models to represent the desired look of the product accurately. Design engineers can later scan the models as an aid in digitally 'building' the product in *ProEngineer* software.

However, the fact that prototyping capability could be obtained at a fraction of the price, and to a better quality, in Asia presents new concerns for Design Partners. On a trip to a client who had used an Asian manufacturer for 3D prototyping, senior designers returned shocked at the quality and authenticity of the prototype in comparison with their own. The consultancy's pursuit of building facilities on-site instead of using external prototyping facilities stemmed from cultural and language barriers. Designers and the MD especially were anxious about quality having used poor-quality suppliers in the past, and presumably confidentiality and secrecy were also concerns. Design Partners consistently prided itself on accuracy and quality of service for all clients.

In addressing the issues and trepidation of the widening global network of suppliers and partners that Design Partners increasingly finds itself facing, the consultancy's

newest hires were all non-Irish. This was new for the firm, whose staff had been almost entirely local. These hires were strategically selected to circumnavigate potential language and cultural barriers to doing competitive business.

Offering of marketing-based NPD expertise

In becoming more strategic and premeditated in its approach, Design Partners is holistically considering the brand development of its clients. Reflecting this is the establishment of 'DP digital', a multimedia communications arm of the consultancy that creates presentations, promotional and marketing movies, accompanying soundtracks, storyboards and micro websites for existing and, potentially, new clients. DP digital employs two full-time and one part-time members of staff. The development of the consultancy means the acquisition of new expertise (e.g. graphic design, advertising, interaction design) to be able to conceive and create a range of marketing communications. DP digital has its own website that appears as a link on the parent company website.

Although this move was in part accidental (a new recruit having first alerted the company by using *Flash* as a tool for more effective presentation of concepts), that it has expanded is purely strategic. The consultancy now has the capacity to follow the products it has created to an incredibly developed stage, and potentially even to launch. Therefore Design Partners can retain control, while other consultancies send the concept to be manufactured independently and without any design input. By transitioning into promotion, by selling a full range of design related expertise, it has the potential to follow products across their NPD cycles to launch, and even to develop the business in another direction.

6.5.4 Multi-skilling of designers

Designers are multi-taskers, operating in and embracing a diverse range of design and marketing-related assignments. The necessity of multi-tasking is in part due to the consultancy size demanding an ever-integrated team approach, and in part due to the

widening remit of the role. For example, all designers, even those most junior and new to the firm, met and liaised directly with clients.

A senior designer described the wearing of many 'hats' on the job. Designing was one part, accompanied heavily by the need for management skills, and extending to 'budget control, to creative exploration to marketing – all these different things' (DP3:6). This phenomenon is especially prominent in the roles of the more senior designers, who also had responsibility for the overall management of projects. It is most pronounced in the remits of portfolio managers who participated in design tasks as part of the projects that they also managed, which were in turn one component of their overall portfolio. A portfolio manager and senior designer told me of instances when he fulfilled three different roles on the same project:

> 'I was managing the product and the portfolio. So where the portfolio was all the xxxx projects – there'd be a lot of projects happening – so I was overseeing the client, but also managing this project, and lead designer on the project. So I had three roles from Design Partners' point of view' (DP3:6)

This crossover in roles can be attributed to the size of the consultancy, and limited numbers of senior designers. All designers, junior and senior alike, also keep their own billable time sheets. All engaged to some extent in project management, managing and estimating for clients how much time would be spent on each stage in the process. Therefore management and organisation are part and parcel of the migration to embracing a more strategic consulting approach.

Training and management

The extent to which training is received for these 'extra-curricular', non-design tasks is low. Many designers report gravitating into the role and the 'learning by doing' of the tasks for which they had become responsible. The broadening of the traditional remit of the industrial designer has clear repercussions for design education. Management training appears insubstantial at both college and at work. College was used as a reference point for some designers, even those with substantial (15+ years') experience. A senior designer described 'gravitating' into a leadership role without formal training.

Rather, this position was attained due to a personal interest in talking to people about design:

> 'I gravitated into the role, and I think I've always been interested in – when other people are interested, I'm always interested. So even in college, if there were people in class who would ask me to talk about their project with them, I'd just latched onto them – I just find it interesting, the whole design process' (DP4:4)

Similarly, a senior designer (SD) described his success as a 'fight or flight' scenario. Learning on the job enabled him to self-equip with the skills to further his career. Perseverance and 'sticking at it' are evident as the means to carving out a successful consultancy career. Therefore, only through 'exposure and experience', in his view, would the junior designers become more dextrous in answering to the requests of marketing:

> *Interviewer*: 'is it difficult to fulfill three roles?' [as discussed on previous page]
> *SD*: 'it is difficult, because you don't get any formal training in that. And you sink or swim'
> *Interviewer*: 'what had you studied?'
> *SD:* 'industrial design. You don't get a lot of training. You have to learn that through exposure and experience. So there are juniors here, like xxxx and xxxx – it takes a long time to really understand, to be able to answer, to give marketing what they're looking for' (DP3:6)

Therefore, one questions whether the more experience a designer accumulates, the better a designer he or she becomes, and the greater the ascent to management. Design Partners is managed by individuals who trained in industrial design, and lack formal management training. It is through design experience that they have ascended to managerial positions. As designers professionalise beyond design, this suggests high levels of resourcefulness to be able to cope with the new demands of the job.

Strategic responsibility

Those designers who had elected to pursue promotion within the consultancy spoke with authority and detail about their new position. Strategic insight underpinned their role, and they appeared to recognise exactly what the client desired. In effect, their response to briefs has been honed to a fine-tuned algorithm of understanding, empathising and responding to the client's point of view. A senior designer noted in

interview that it is vital in his role to understand the particularities of the people with whom he is dealing:

> 'I think a designer's role is not being master of any of these other disciplines, but having the ability to understand them. And if you understand them, you can make a counter argument as well which is always handy, but if you understand them at least you know where people are coming from' (DP6:7)

All designers have particular, specialised knowledge of the full range of NPD activities, from idea conception to product launch, despite naturally having leanings towards one side or another of the process. Yet all were strategically active in the processual and functional conditions leading to new products. Designers thought deeply about when and to what extent they could exert their design influence in the wider NPD sphere. A senior designer noted, in relation to the wearing of a 'lot of hats', that the timing of the putting on of these hats was crucial:

> 'I'm good at wearing the right hat at the right time in the project, because there's a lot of hats you can wear' (DP3:6)

The strategic element is emphasised. In his NPD role, he is particularly careful and considered about what to say at what stages in the process, for fear of disrupting the process:

> 'you have to be careful because sometimes if you give … there are different stakeholders in the project, and if I was to say something that from a product sensibility point of view and with the user in mind I thought would be the right thing to do – if I say it at the wrong time in the project, it could have a detrimental effect. Because it could be a point where engineering have said "ok, if you want to make that change now, it's going to add three months to the timeline, and it's going to up the cost by $2" – you could get negative feedback as a result. So yes, they want our feedback, but it must be at the right timing, so timing is important' (DP3:8)

Designers have to be attuned to the politics of design, in which strategy and tactics play an instrumental role. This ploy is intangible, and is definitely not on the design school curriculum. Learning on the job is the single most important means of securing and navigating a smooth design process. Management, people and negotiation skills are increasingly part and parcel of design, where the functional, the analytical and the strategic are fused in the handling of the bundle of leadership activities that design has become.

6.5.5 The 'ice breaker' consultancy – reframing and taking greater NPD leadership

Design Partners is migrating to a new space in design consulting. The concentration on the hands-on practical work is being superseded by a new focus in strategic consulting. Reconfiguring the consultancy and its clients towards this new space is a challenging task. While the strategic component of the offering – at the prow of the ice breaker ship – is a new and developing area of expertise, there is also need to continue to embrace the importance of service provision in the engine room. A senior manager summed up the new demands faced by the company:

> 'we're a bit of a middle ground in terms of how we work and where our creative level comes from. And I think we can switch it to different gears depending on the client. So if a client wants us to be very experimental, we can move into that gear. If the client wants us to push something through practically, pragmatically, I think we can go into that gear. So I think we have that versatility. And I don't know if that's a good thing. I think would you be a stronger design team if you fundamentally had a particular gear that you tended to be in, but that's not really who we are. We tend to be this adaptable, versatile team, and we'll switch into the gear that you need to be in' (DP9:11–12)

The consultancy is flexible in its approach, and designers have the versatility to work both on the prow and in the engine room. However, the evidence presented above suggests that, having previously spent more time providing a service in the engine room, Design Partners' work is gradually migrating towards the overarching strategic tasks undertaken at the prow. The consultancy is attempting to harmonise the two extremes; for example, (1) it manages clients while strategically manoeuvring itself into a position of greater design authority, (2) designers are embracing the language and craft of business and marketing, and melding these with design sensibilities, and (3) the consultancy is equipping itself to participate across the NPD phases. In essence, Design Partners is offering a blend of the marketing-led and design-led.

6.5.6   Conclusion: the changing face of design consultancy

The early embracing of the language and craft of marketing has enabled Design Partners to reorient itself into a more powerful and increasingly knowledgeable position

and, in doing so, it has assumed a degree of ownership and responsibility outside of the traditional sphere of influence. As the whole landscape of business reorients towards the production of services and experiences, rather than objects, as processes provide the chance to obtain competitive advantage, the offering of the design consultancy (and the client firm) is changing in tandem. As both take on new challenges, these major shifts account, in some way, for better alignment of design and business.

Technology, society, culture, the economy and the environment – along with responsibility and obligations to employer and user – are all areas of concern for designers. Today, products are assuming extra and relevant meanings and value, and designer is being challenged to identify and incorporate these in the objects they create. As a senior designer noted, 'anyone can design a mouse, but why is this relevant for [the client]?' (DP3:12). No longer are the illogical and random skills enough for design consultants in their enlarged, business-oriented domain. Design Partners is using its amalgamation of the strategic and the practical, increasingly selling a unique blend of premeditated and functional insight, and transitioning to take a greater leadership for its clients' NPD processes.

7 chapter seven: subsequent case studies – findings and analysis

Primary 'exploratory' case	→	Subsequent 'critical' cases	→	Integration and discussion
Finding 1: A broadened designer remit	→	*Finding 4:* Taking ownership of NPD	→	
Finding 2: Interface of designer and client	→	*Finding 5:* Value of designer–client interfaces	→	
Finding 3: A changing business model at Design Partners	→	*Finding 6:* A reorientation in design consultancy	→	

7.1 Introduction

This section deals with the findings of three shorter case studies undertaken at international design consultancies. The findings in this chapter are interpretations based on the data compiled in Evidence Tables 4-12 (as listed in Table 5.4). All three consultancies were founded in the US, and all have their HQ in California. As part of the research, I visited one studio location in Germany (Munich), and two in the United States (New York). Conducted one year after the initial case study was completed, the findings arising from analysis of the primary case study were further explored. As described in the methodology chapter, this research involved semi-structured interviews with eight designers, five at DesignworksUSA (coded DW1–5), two at frog design (FD1 and FD2), and one at Smart Design (SD1). The interview process aimed to draw out the designers on the previous findings surrounding evolving design leadership, but also afforded opportunity to describe new ideas and development of how and why design and design consultancies are in a state of transition. These subsequent cases refine, develop and quasi-corroborate ideas of design leadership, as well as providing an international comparison.

7.2   Research sites

7.2.1   DesignworksUSA

DesignworksUSA was established in California in 1972. It has studios on three continents, in California, Munich and Shanghai. It is a wholly owned subsidiary of BMW, having been purchased in 1995. The consultancy must pitch, in competition with other studios, for BMW automobile interior and exterior projects. Work is balanced 50/50 between BMW and external projects. It works with many other mature product category household brands, such as Starbucks, adidas, Nokia, HP and Deutsche Bahn. Although it has a specialism for transport design, it also does industrial design, brand communications and strategy.

DesignworksUSA's studio in Munich is set apart from BMW's design centre. It is in a Munich city centre business district. The studio is at the top floor of an old, converted building, situated in a quiet square off a main thoroughfare (Figure 7.1). Various domestic and international firms occupy the other floors of the building. A few past projects adorn the waiting area, including a model of a yacht recently designed by the consultancy. The premises are divided in two parts: a 'corporate' space (as it was referred to) is separated from the designers' 'work' space by a kitchen and communal area. Next to the reception, the corporate area comprises closed-door meeting and brainstorming rooms. A central corridor is flanked by boards showing completed design work. The communal area at the heart of the studio is used for recreation and internal meetings. It is a high-ceilinged attic, with skylights, and is lined from floor to ceiling with shelves containing back-issues of design magazines, books and collected stimulus objects. These objects and books, my contact explained, act as inspiration for designers' work. The tour stopped here as I was not permitted to enter the studio workspace.

Source: designworksusa.com

In general, DesignworksUSA has an aura of secrecy, which contrasts with Design Partners, frog design and Smart Design. For example, the room in which I conducted my first interview was a well-lit brainstorm room, where all boards and images had been turned to face the walls so that the room was completely white – floor, ceiling and walls. The business development manager sat in on interviews with more junior designers. No current projects or client experiences were mentioned in the course of the conversations or interviews. Presumably the designers with whom I came into contact had been instructed not to reveal any specific project details. Indeed, in one case, the strategic director of the consultancy backtracked after mentioning specific timelines and products:

> '*For example if* we want to design the new '3 Series' that will come out in – just a number, *don't call me on that – say* the new 3 Series comes out in 5 years, *or* 6 years, then it's about time to start to think about the exterior – what do we want to achieve, how does it fit in the portfolio' (DW3:1)

7.2.2 frog design

Frog design, established in 1969, has studios in eight different sites in the US (San Francisco, Austin, New York, Seattle), Europe (Amsterdam, Milan, Munich) and Asia (Shanghai). It is a self-proclaimed 'global innovation' firm: consultancy divisions are, for example, interaction design, industrial design, technology, analysis and strategy. The consultancy works on a range of product, interactive, strategic and communication design projects for well-known, worldwide brands (e.g. HP, Microsoft, Apple, Dell and Lufthansa). While its clients are varied, frog has a reputation for its work in the consumer electronics industry.

Employee empowerment is clearly very high – frog designers are regular keynote speakers at forums and conferences. Designers have published books (e.g. *Innovation X*, by Adam Richardson (2009); *Thoughts on Interaction Design* (2007) and *Exposing the Magic of Design* (2011) both by Jon Kolko), and are regular contributors to practitioner design publications. The *Design Management Journal* and *Harvard Business Review* have both featured articles by frog consultants in recent years. The consultancy also publishes its own monthly magazine called *Design Mind* in hard and e-formats. Moreover, consultants regularly engage in high-profile speaking events; for example, the recent *TED Global* conference (in Oxford, 2009) and *DMI Design Research* conference (at Illinois Institute of Technology in 2010).

I visited the New York studio, situated in the once bohemian, now gentrified, Greenwich Village district. Frog's 70 or so New York employees occupy part of the seventh floor of a typical Greenwich Village office building – unassuming from the outside, inside a hub of activity. Inside, walls are painted in a bright green, consistent with the company logo (Figure 7.2). The reception area, manned by a young, pierced, head-setted receptionist, is resplendent with the fruits of frog's 40 year history; for example, frog publications, *Design Mind*, and past completed industrial design projects (including the early Apple 'IIc' PC). The reception area is at the centre of the office space. To one side is an open-plan managerial office space. This is surrounded by smaller 'project' rooms, one large conference room, and a purpose-built research room, complete with double-sided mirror. Meeting rooms are named on a 'frog' theme, for example, 'Lily Pad'. A green corridor links to another large open-plan design studio

space, occupied by designers. Designers sit randomly at large desk spaces, rather than being grouped by discipline. The open-plan space is adjoined by several other smaller project rooms, and a kitchen-cum-recreation area for staff.

Figure 7.2: frog design, New York

Source: frogdesign.com

7.2.3   Smart Design

Like frog, Smart Design is a world-renowned design consultancy. Established in 1980 by a group of graduates from Syracuse University's industrial design course (Davin Stowell, Tom Dair, Dan Formosa, Tam Thompson, and Tucker Veimeister), it has expanded to three locations: San Francisco, New York and Barcelona. Smart Design works on a range of projects for clients in a diverse range of industries, including HP, OXO International, Ford, General Motors, and the NY Taxi and Limousine Commission on industrial, interaction and brand communication projects. Recent projects are shown in Figure 7.3.

Figure 7.3: Smart Design recent completed work: industrial and interaction design
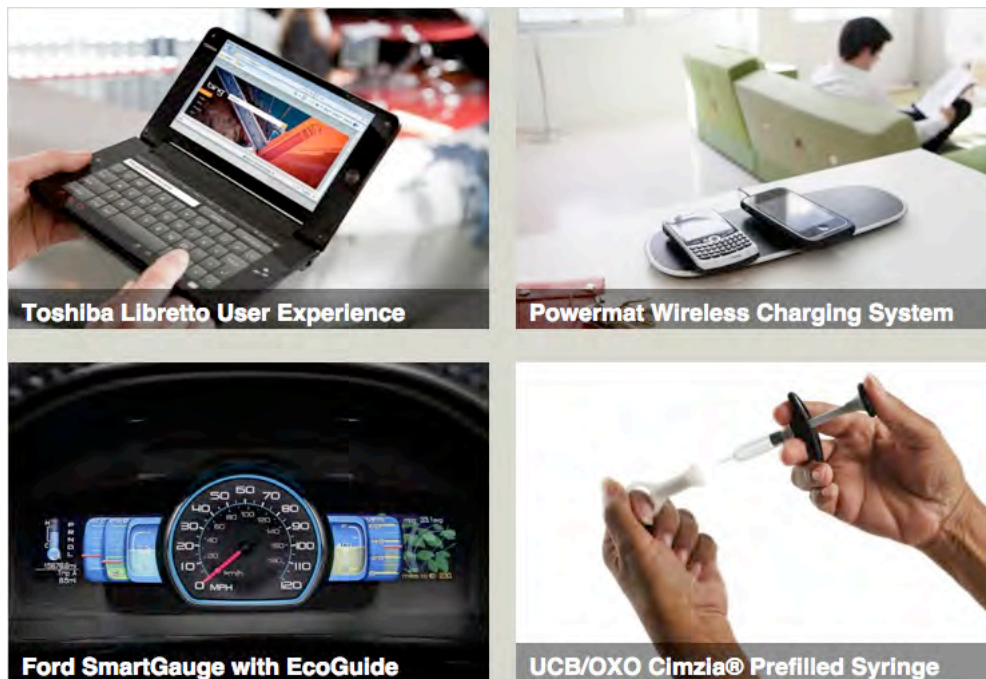
Source: smartdesignworldwide.com

The consultancy has been a lead proponent of 'universal design' (a philosophy of designing for everyone) since the 1980s: the Smart philosophy is that 'design is about people, not things'. Its approach to design was profiled in *Objectified*, the 2009 feature film on industrial design by director Gary Hustwit. Empowerment and diversity are celebrated at the consultancy. It has sub-groups exploring and specialising in designing for underrepresented demographics. Femme Den, for example, is a Smart Design collective looking specifically at women's role in industrial design, as well as creating products suited equally to women and men. Employees are well known in the international design field, are regularly invited to speak at international conferences (e.g. *DMI Design Management Europe*, *International Conference for Universal Design*), and are contributors and bloggers for practitioner publications such as *Fast Company* and *Business Week*. Smart Design won the product design prize at the 2010 US National Design Awards.

I visited Smart Design's New York base (Figure 7.4), a loft on the 18th floor of a converted warehouse building, populated by fashion and production companies, in the

arty Chelsea district in midtown. The space is extremely open-plan, which seemingly caused problems for privacy. Upon entry, visitors must sign a non-disclosure agreement, and full-length orange curtains can be opened and closed to seal off a third of the studio space where current project work is undertaken. Designers – dubbed 'Smarties' – are spread randomly, again not seated corresponding to discipline. Most work on Apple computers. A large meeting room with video-conferencing facilities, and smaller meeting rooms and meeting areas are clustered to the front of the space. Two kitchens adjoin – one for testing prototypes (consumer kitchen appliances are key in Smart's project work) and another for recreation. To the rear of the studio, a separate workshop area houses state-of-the-art CNC and prototyping machinery – its significance will be discussed later. Enormous double ceiling-height windows over an entire wall of the studio overlook uptown Manhattan.

Figure 7.4: Smart Design New York

Source: smartdesignworldwide.com

7.3   Finding 4: Taking NPD ownership

Building on the evidence in section 6.3 that finds a broadened remit for the design consultant, the subsequent case studies find that the designer is taking a more extensive involvement from the beginning to the end of the NPD process. Based on interpretation of the data in Evidence Tables 4, 7 and 10, this section suggests that the role of the designer is becoming increasingly strategic and important as it takes ownership of, and coordinates, the NPD process. This finding develops the research by Perks et al. (2005) which suggests that the designer is moving to a leadership position in NPD.

Designer ownership of the NPD process was evident across all the subsequent case study consultancies, and was manifested in a number of ways. In some ways, it is a natural extension of their role. One principal designer described the consultant designer's particular skill in having the ability to transfer expertise gained through previous projects. In this view, the client sought their experience and their expertise:

> 'they are paying us for our ability to come into an industry we don't know and pull in the stuff we've learned off a completely unrelated project about how people are using services or whatever it is, and apply that in a meaningful way to their industry, and their design problem' (FD1:14)

The suggestion is of authoritative consulting. This section examines the designer's greater ownership of the NPD process. As the result of a broadened remit and the trend towards a quasi-marketing role, design is suggested to act in a capacity that steers NPD. As designer takes responsibility for tasks outside the traditional scope of design, it is posited that this shift in the scope of design allows it to act as a coordinator – leader – of the NPD process.

7.3.1   A broadened remit

The designer's remit is composed of the traditional practical aspects of design, but non-traditional, managerial and organisational activities consume a sizeable portion of the designer's time. This varies depending on level and experience; for example, junior designers spend more time on the practical, traditional tasks, whilst more senior

designers and creative leads claim to spend equal, if not more, time on the managerial activities. A creative director at one of the international consultancies went as far as to suggest that most of his time was taken up with team management and business developing, while doing the actual project work was squeezed in around these tasks:

> 'most of it is about team management … a lot of business development. So writing up proposals for the next wave of work. And then resourcing, getting the right team members on it, and then finding the time to do the actual work' (FD2:15)

At the same consultancy, a senior designer was specific in breaking her work time into a 50/50 split between the project work and other organisational duties:

> 'maybe 50% is doing the work of the project, maybe 25% is probably client, and maybe 25% is probably team' (FD1:15)

The drift from a focus purely on project work towards a remit that is more strategic and organisational is clear. This echoes the divide in strategic–functional tasks evident at the first case study. This research also uncovers a strategic element to both the practical and the organisational dimensions of the job.

7.3.2   The designer 'all-rounder': harnessing a range of non-design skills

As reported in the literature review, it is typical that design consultancies are started and run by designers. While these designers are typically formally trained in a design discipline, they tend to 'hit the ground running', being forced into learning the basics of running a business at an early stage. Those that survive and expand do so due to the designer–founder's business sense. There is little surprise therefore that all four consultancies studied had been established by designers trained in design, and were run by designers. That design is business is a philosophy and approach of a successful design consultancy, and this ethic appears to run deep to the present day in these companies.

Owners and designers alike had, directly and indirectly, embarked on steep learning curves to cope with the demands of working in consultancy. This runs contrary to the perceived image of the designer as a functional worker. Of the managerial staff

interviewed, which included consultancy founders, there was a trend for further education to better understand and deal with the demands of managing a design agency. One creative director had recently completed an MBA. Another, an agency founder, had a PhD in a design-related field (biomechanics). Likewise, the MD of Design Partners was pursuing executive-level managerial training.

Among the employed designers, there was a clear pursuit of developing knowledge. While all were trained to bachelor's level at minimum, often designers were curious, and had avid interests outside of the field of design. As a result of the dynamic nature of consultancy, designers were widely knowledgeable about domains outside of their specialist areas of interest. Often they were all-rounders who, having worked on projects for a wide variety of clients, accumulated broad knowledge through experience, and engaged in steep learning curves on commencement of new projects. While being expert in one field of design, the consultant generally develops an awareness of many other areas.

Consultancy design is a fast-paced profession, where the demands of new clients mean a continual quest for knowledge. One senior designer described the job as an ongoing series of races and deadlines, with little time for repose:

> 'you're always ramping up. So there's not a whole lot of "oh, I'm comfortable with my job, you know, just doing my stuff" … you're always ramping up, always racing to an end' (FD1:22)

Deadlines, development and dynamism are characteristics of the profession. Design is a job, it is business and it is a means to an end. To that end, designers know a little about many diverse subject areas. To be able to solve problems adequately, it is crucial that an in-depth understanding of the clients' situations is accumulated. This is part of the idea of a broadened designer remit.

The empirical research finds evidence to support the notion that designers' knowledge is extended to be in tune with the client's ways of working. The designers were not passive, concerned only with form-giving. Rather, awareness of, for example, client-side hierarchies and internal politics, marketing, users and technology is mandatory to be able to surmount the design–marketing disconnect, and to progress successfully through a project. This type of extended awareness, the set of developed capabilities

and skills, allows designers room to manoeuvre to a position to enable strategically steering projects from a detached, external point of view, but one that maintains close ties with the client (through knowledge, and relationships). One of the most common ways of taking extended ownership is designers' appropriation of some of the traditional tasks of marketing.

7.3.3 The designer–marketer

Designers are extremely marketing-savvy, mirroring those in the primary case study. Having an in-depth understanding of their clients' problems – including their industry situations and competitor profiles – is an essential part of their approach to design. The designers do not see it as their job merely to produce a sketch detailing product form. Rather, their involvement goes deeper to create products that are appropriate for the organisations that produced them, competitive in the markets in which they are sold, and meaningful and usable for the users.

When a new product is conceived, the surface detailing is often considered in the later stages of NPD. A senior designer, a creative director, described the objective of the early stages of NPD as putting the 'brand into physics'. This sophisticated term describes his consultancy's outlook on the design process, where the creation of a product relevant to the client organisation's situation is its core starting point:

> 'if we are in a sketch phase trying to build up a product character, then the brand is very important for us and this is one of our USPs – we understand we are three strong brands within the BMW group, we're used to working with these three brands, BMW, Mini, Rolls Royce, and because that is so, we can understand also for other clients, how to think brand and put brand into physics. In the beginning, the design development phase, of course you need to know the general package data, but it's much more important to know what kind of brand values should be communicated' (DW3:3)

That this outlook originates from a group of industrial designers is striking. The idea of putting a 'brand into physics' – of making tangible an intangible set of ideas – extends into the remit, concepts and theory traditionally associated with marketing. The designer's objective is to translate a set of values and to make a functional, saleable product that communicates these ideals.

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The remit of the designer is deeper, more meaningful and complex than merely creating an aesthetic shell around a preconceived product. The idea of creating a marketing 'story' – the idea around which the products were made relevant and saleable on the market – is a core ingredient in product development. The designers consider themselves involved in NPD from the beginning conceptual phases to the final launch and evaluation phases. Indeed, one senior manager, a trained industrial designer working in a managerial role, went one step further to suggest that marketing takes its cues from design's propositions. He described that the designer's knack for talking about the wider marketing story, the 'emotions' behind the design, was the starting point for the marketer's part in the NPD process:

> 'for marketing, it's not so important to talk about how marketing thinks it should talk, but actually take content of what was created in design and translate that for the consumers. So our way of talking about things, talking about design, talking about the emotions behind design which is very important – so having those emotions also translated into marketing into stories' (DW1:1)

This is a forceful statement that places responsibility for product creation onto the shoulders of the designer. Other designers report more balanced partnerships with clients, but often one where the designer acts with a degree of authority to direct the client organisation's business direction and offer broader strategy consultancy.

7.3.4 More than form: designer as strategy consultant

Product development is a hugely significant portion of any firm's activities. It dictates firm strategy, targeting, pricing, distribution and placement decisions. With their expanded ownership, designers can be considered to play an overarching strategic role. It emerged during the fieldwork that the design consultant does in fact wield influence greater than purely surface, product design advice.

Some design consultants spoke about situations where direction was offered to the client outside of the design brief that they were initially given. Guidance was offered on business direction as well as design and product development advice. One senior design manager spoke about his frustration at a client's predilection for following the results of market research too closely. The designer considered the client's strategy to

be weakened due to lack of strong internal vision. The response of the design consultancy was to help set in place a clear direction:

> 'what we're advising them is on a different level, we're saying "no, you've gotta decide who and where you wanna be"' (SD1:8)

In this situation and in others, the process of design is considered to start from the opposite end of NPD – rather than devising objects, designers consider their work to start by imagining an intangible overall vision, and only then devising tangible solutions to arrive at that endpoint. The same design manager spoke about his consultancy's adoption of this approach, which was often the topic of internal company meetings. In this view, 'vision' was the term to describe an image of an overarching program of change, rather than a specific, single product project:

> 'we have this discussion a lot – what we really need to start off with, or to get very early on in the project is a vision of where you wanna be. Not a vision of the solution, but a vision of where you could be in this. And then come up with solutions to get you there' (SD1:7)

The same consultancy had done work for Ford, where the realised product adhered to a different concept from that specified in the initial design brief. Ford had contracted the consultancy to make an in-vehicle interface for its hybrid cars that would emotionally engage with the driver. The solution conceived by Smart Design communicates with drivers in a different way from the traditional needle speedometer. The designers created the *SmartGauge*, a customisable LCD dashboard (Figure 7.5 and Figure 7.6). The SmartGauge interface aims to influence drivers' behaviour, and increase their understanding of driving in order to encourage more efficient driving styles. It has immediate meaning for users, and is customisable in its interface, but the technology also acts as assistant in maximising fuel economy. In this way, it expanded the design brief, as well as surpassing initial expectations. Smart Design's cofounder emphasised the designers' vision was in changing the clients' traditional ideas for the product and, in doing so, revolutionising the traditional car dashboard. He told me: 'it's more about setting maybe a vision a little bit higher than the actual thing' (SD1:7)

Figure 7.5: SmartGauge LCD dashboard (Smart Design)

Source: smartdesignworldwide.com

Figure 7.6: SmartGauge engenders more eco-efficient driving
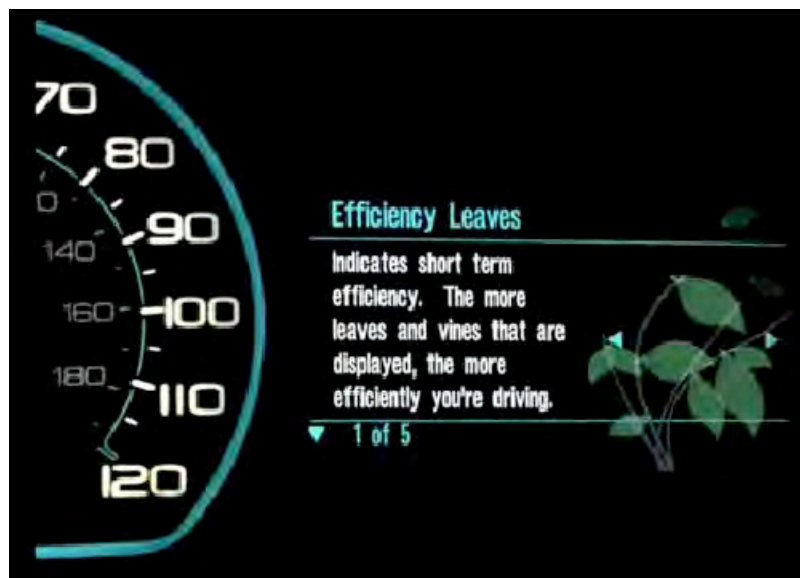
Source: smartdesignworldwide.com

This approach was typical of the consultancy. Another situation involved the design of self-administering medical equipment. Instead of focusing on the object – the syringe – the project was expanded to create an entire ecosystem centred around getting the medication into the patient's body. In these projects, the consultancy's approach moves outside the traditional realm of designing tangible objects. By extending the design problem and challenging the scope of the brief, designers are able to steer clients' vision in a different direction.

7.3.5 Designer as authority: concept selection in whose hands?

Exerting ownership through design vision contributes to building the consultancy's status as an authority, and as a respected input in the NPD project. A clear opinion of the problem and solution, clearly formed as the result of knowledge and research, is required in order to be able to suggest a vision to clients. However, at the consultancies studied, it was also acknowledged that design is a sensitive area where modesty and advising, rather than coercion, were key. A creative director spoke of a necessity to revere the client's knowledge of its business, and this affected the approach to concept selection. Rather than dictating, his consultancy's approach was strategic, focusing on educating the client:

> 'the client knows more about their business than you will ever know. You're there for eight weeks, and if you go in there and be like "well, you should change your business because…" … be humble. Go in there and make, again, strong points of view, educate' (FD2:13)

As an authority in design, and in the enlarged ecosystem of the project, the designer finds himself or herself well placed to make recommendations on concept selection to the client. Interestingly, this consultancy's approach involves education of the client: by engaging deeply, the designer exerts even greater responsibility and ownership of the project. Nevertheless, however strong the designer's opinion may be, there is a fine balance between counsel and direction. This notion was reiterated at all the international consultancies. A business development manager at another consultancy saw it as outside of the designer's place to dictate:

> 'what we wouldn't do is tell him "for your company you need this kind of image", because the company itself should understand what best its image is. We can tell them what the best fulfilment of the image is' (DW1:3)

As an external supplier, the quandaries faced by the designer consultant are again apparent. The designer is faced with having to navigate a fine line between service providing – solely providing ideas from an external standpoint – versus being an authority with intense involvement in the client's NPD effort, but ultimately neutral to the client's final decisions. This is certainly a contributing force to the design–marketing disconnect (described later in section 7.4.8).

The idea of the designer as an authority versus a service provider, and the dilemmas that accompany the quandary, have been introduced. The designer, in his/her well-informed state, is wholly capable of synthesising and making credible recommendations for the client. While there is a sensitivity in how exactly to influence the client, the ability to form a strong opinion is desired, even crucial, for the project's progress.

7.3.6   Guidance through strong opinions and filtration

As a prominent contributor to determining product success or failure, many designers interviewed believed that having a strong opinion in order to be able to guide the client is an important aspect in the designer's perceived credibility. Having a clear, confident point of view as to the project direction was reiterated in the interviews conducted as crucial to gaining the respect of the client.

In arriving at cohesive and strong opinions, research is considered to be critical: the designers care about how their ideas would perform, and want to make the best possible product for the client (developed in section 7.5.3). Guidance offered to the client was regularly reinforced through thorough research. A senior manager noted that the degree of effort and time spent creating concepts means that designers are both enthused and confident about their solutions. This enables the designer to have strong opinions and hence to make credible recommendations to the client:

> 'by the time you get here, not only do you have all this backed-up material, but you're so damn sure, you're so enthused, you're like "right, so they can actually make a legitimate and a very confident recommendation"' (SD1:4)

As in the primary case study at Design Partners, concept presentation and selection is an important stage in the process at which the designer can exert NPD control. By presenting only concepts that follow a coherent theme, designers are able to ensure that an adequate solution is selected. 'Funnelling' of ideas to follow a unified theme is a key method by which to exercise leadership, and offer guidance to the client.

Idea 'funnelling'

In the first case study, the 'machine-gun' approach (see section 6.3.1) is described as being of little assistance to the client. Similarly, a senior manager noted in interview that by presenting a range of concepts, the designer was handing control over to a less well-informed client. This, he claimed, was widespread in design:

> 'I'm not saying you have to come up with one thing and say "do it", but you should have some backing, or some thoughts about why you're making those recommendations, and not just offerings. Because once you make those different designs as offerings – and this goes in the field all the time, right? This goes on in the field of design all the time! That you make four or five or six different offerings and it really then puts it in the hands of the marketing group to be the design authority, based on marketing' (SD1:8)

By having a strong voice, a unified set of concepts following a firm vision or marketing story, designers consider themselves better equipped to deal with their marketing client. This is used to lead the client and to overcome the marketing–design disconnect. Several designers at the international consultancies studied spoke about the necessity of having this clear opinion, and presenting to the client only ideas concurring with this theme. As in the first case study, designers spoke about unifying concepts with an overall 'vision', and making these relevant through the creation of an overarching story. In this task, designers were adopting part of the role of the marketer.

Some designers interviewed frowned upon the presentation of too many ideas to the client. Indeed, one suggested that the problematic design–marketing disconnect prevents many ideas from being shown:

'if it's a marketing person on the other side, it's very, very difficult to show them a lot of ideas' (DW2:8)

Whether or not it was a difference in the client's capability and background that prevented the presentation of many ideas is not apparent. Designers are clear, however, that it is their place to take responsibility and offer recommendations in direction to their client. They were consultants in the purest sense: they offered their expert guidance and advice. Showing too many ideas was considered to be a grave mistake, since this was perceived to reflect a lack of understanding. In the opinion of one senior designer, like many designers in the first case study, ideas should be based on a coherent understanding of the design problem. Presentations should centre around why the idea is 'relevant' to the brand:

> 'I'd say that one of the key mistakes that designers do is to try to excite too much, and they show too much – they show everything. I mean for most companies, ideas are not the problem: it's more how do you actually funnel them into functional items, and how relevant are they to the brand, to the customer, to what the company can do' (DW2:6)

Concepts based only on sketches were considered wholly inappropriate, and useless for the purpose of furthering the brand. In their role as quasi-marketers, designers develop ideas around more substantial research. Another senior manager was critical of a presentation he had seen by another design group. In this presentation, the team offered numerous and diverse concepts, from which the client had to pick one. The designers offered no guidance, and had no strong opinion about which concept should be realised. This, he claimed, is entirely counterintuitive to the role of the designer: the decision is important, and so the choice should be an informed one, rather than random and based on personal choice:

> 'I saw a god-awful presentation from xxxx – they were really what the design team does is whole bunch of sketches – and no fieldwork at all. And a bunch of people come by, and someone, the design manager or someone over there, basically picks one off the wall! I've seen a lot of design groups develop like three concepts, or five concepts, without having any strong opinions about any of them. They're just offerings. So "you can go this way, you can go this way, you can go this way" … do you need five different ones, or do you need one good one? … if the design team doesn't have an opinion, then they shouldn't just pick one' (SD1:5)

Leadership of the process was demonstrated in the approach undertaken by the designers in concept presentation. Expertise and ability to guide were derived through

research, and also by experience working with other clients. Trusting relationships were hence developed, and also through the interpersonal factors previously described.

7.3.7   Designer as glue in NPD

The evidence suggests that designers are taking greater ownership of and responsibility for the NPD process. This thesis posits that the design discipline has, as a result, attained an important and primary role as a central figure – a leader – in NPD. Some described a sense of being a lynchpin in the coordination of NPD. This reiterates the idea that design is the 'glue' holding the process together, as identified at Design Partners.

That the remit of the designer has evolved to integrate issues relating to production, marketing, brand and user is significant. By having to internalise knowledge on these areas in order to be able to conceive product rationale and create an appropriate concept set, the designer becomes an invaluable lynchpin in the process. Since the designer needs knowledge on this set of inputs, he/she becomes a central figure – one to which the other players may refer for immediate advice. Indeed, at one international consultancy, a senior manager described the designer as the 'hub' around which the project revolves. By being the centre point for information exchange, the design team is in a very 'valuable' position:

> 'So sometimes a designer project like this can become a catalyst, and that can put the design team in a very valuable position, and also it can be because design team needs to know a lot of stuff – as soon as they ask the right questions, they kinda become the hub between this group and manufacturing and quality control, marketing, distribution etc.' (SD1:11)

The NPD process is clearly multidisciplinary. However, it is suggested that the designer's role in coordinating this effort is very powerful. By being epicentre of the network, the design team can operate from a plateau, overseeing all inputs in the process. It was suggested earlier than the designer is able to create the product vision, and the 'story' around which it is relevant on the market, which is then used as the starting point for NPD. By operating in this focal position, the designer has a greater

chance of assuring that this vision is realised according to the initial specification when it is eventually launched on the market.

At an even more sophisticated level, the designer takes a leadership role in mobilising the NPD network. The same senior manager described the designer's role in unifying the client's network. By being this influential 'hub', the design team can act as the glue to band together disparate groups and ideas within the client team:

> 'usually we start off with a project with a, especially if it's a new client, with understanding and talking to many, many people within the company, and sometimes getting them to talk to each other … Sometimes it happens in the same room, you pull these groups together within a company who haven't spoken to each other in that way – in an informal creative way – they may have been in a conference, or in email or meeting, right? But they never sit around a room and chat, and say "this is what our issues are, this is how we manufacture, this is our quality control problem, or this is our marketing issues, or this is what's happening here"' (SD1:11)

The designer and design team hence fulfil many roles supplementary to those functional design-based tasks. While the onus for the product is adapted around the practicalities associated with each stakeholder, the designer, from his 'lookout' position, is coordinator of the collaborative NPD effort. As a 'hub', it is natural to assume a leadership role.

However, in conceiving the product vision, by creating the 'story' around which the product is relevant on the market, design is one part of a network of inputs. While the designer may gate-keep information, and may control final synthesis, one senior designer and manager pointed out the collaborative nature of the NPD process:

> 'it's the marketing people that come up with the right kind of position, it's the advertising, it's the packaging it's graphics, it's the engineers who think the right solutions, it's the tool maker who ensures the quality is right. So a product when it comes to the market is a collaborative effort of everybody, not just the designer' (DW2:11)

7.3.8 Conclusion: extra NPD ownership as precursor to leadership

In this section, a range of evidence has been presented that illustrates the designer's migration from a functional, hands-on NPD involvement to one of increased strategic

gravitas. Designers' work encompassed managerial and organisational activities, as well as the tasks more traditionally associated with marketing, and developed skills and competencies in business as a result. By having this extended expertise, by becoming involved across the NPD process rather than in pure designing, in particular at the front-end, designers offered a greater scope of strategic input.

Designers are becoming involved in, and taking ownership of, considerations beyond the conventional scope of design; for example, marketing, client brand and production. As he/she synthesises these intangible influences into a tangible product, the designer becomes a crucial lynchpin in the NPD process. He/she becomes the hub around which the other stakeholders revolve. Therefore, the strong-willed and well-informed opinion of the designer becomes of paramount importance in NPD decision-making. As NPD coordinator, the designer is offering the client an increased scope of guidance. In this respect, increased involvement, ownership and responsibility becomes a precursor to the designer's leadership of NPD.

7.4   Finding 5: Value of designer–client interface

This section deals with the evidence surrounding designer and client relationships. Based on interpretation of the evidence synthesised in Evidence Tables 5, 8 and 11 (Table 5.4), the personalities and individuals playing a part in the NPD process are found to have profound influence on the smoothness of the design process, and on the outcomes of the project. This section develops the findings from the primary case study in section 6.4, and explores why relationships are important, what constitutes a positive relationship, and what are the precursors to, and results of, a flawed relationship.

7.4.1   Close bonds and intensity of projects

As in the primary case study, bonds between designer and client, and designer and project, are significant. Designers are passionate about their profession, and passion

and personality are key features to creating a successful project. One designer described this bond with the people and the project as 'emotional':

> 'most of these programs are hard fought, to get them in-house, and then to work on them, when you create a pretty strong bond with the people that you work with. Even short programmes are very emotional' (FD2:18)

Familiarity and close bonding between client and designer is crucial to assuring mutual understanding, and a smooth process. DesignworksUSA is an example of this. As a wholly owned BMW subsidiary, 50% of its work is BMW projects. Symbiosis and 'comfort' has been built between the two firms, in terms of the people, values and projects. One senior designer told me that designers are extremely familiar with, and understand, the BMW brand, the people on the BMW client side, and therefore that designers understand how to drive the brand effectively. This was considered to be very positive and important for the smooth running of the project:

> 'DW is BMW, DW has the DW culture, but it adopted quite a big chunk of the BMW culture. Now if we work with BMW people, mostly we know them before the project starts, and if not we know somebody who introduces us to them. And secondly, if we go to a meeting, we know how people react, how they argue, and we know their pains, we know their values of BMW, and we know the grading of professionalism that they expect from us without that we explain what we do. And I would think thirdly, we start talking about the actual demand of BMW much faster than so-called third party clients, or external clients. Because we mostly know where they are in the organisation, and they mostly know what we do in the organisation' (DW3:5)

While this could be interpreted in terms of the two firms having the same ownership, bonding and familiarity with client and brand is recurrent at other consultancies whose clients are external. Being in tune with the client and the client organisation simplifies the design process. Another designer explained that projects with long-term clients unfold much more quickly than when working with a new client. He described feeling synergised with the individuals with whom the relationship had developed over a number of projects:

> 'with a client we've already worked with, I'm much faster with the process, because I know already what the client is thinking' (DW4:1)

Equally, long-term relationships benefit client as well as designer. Another designer inferred that positive relations, by creating understanding on the client side of the design approach, are one way to counter client resistance to design buy-in:

> 'once you've started a relationship, once you've got a relationship going, there's a little more synergy and understanding of how we may be working and with what we're bringing to the party' (SD1:10)

A parity, 'synergy', even symbiosis, in method and approach has been developed between designer and long-term client. That positive relationships yield better project results is a common perception across all consultancies studied. The importance of building – and nurturing – positive, trusting relationships with clients is reiterated as being of great value for several reasons. First, positive and trusting relationships allow easier flow of information across parties; second, positive communication is linked to building bonds; third, accurate information allowed heightened credibility; fourth, increased validity enabled better understanding of the client business and created more ideas; and finally, these good relationships (along with more ideas) encouraged and fostered repeat projects and business.

7.4.2 Briefing and trust

The findings suggest that the extent to which design and designer are trusted and appreciated dictates the extent to which design is involved in the client's product development process. A design director at an international consultancy explained that design has a profound effect on the outcome – success or failure – of the client organisation. The personal guidance of the designer is, in his opinion, a major force in determining that course:

> 'design is a profession that requires a lot of, or that creates a lot of trust – should create a lot of trust – among the client. Simply because the product that the company is going to do is deciding over success or failure – if a company decides for the wrong design and the wrong product, and they develop it, it's too late to change … So it's a very critical service in which you need to build up trust. And that trust is something that is not only in the skills that the company can deliver, but it's also of course in other enablers. And I'd say that a personal relationship is important in consulting a company, in trying to find out what are the benefits you can bring in understanding the client really well. But I would say at the end of the day it's a matter of trust' (DW2:13)

In general, the briefing session is a key determinant of the design project. At Design Partners, such was the symbiosis in relationship that the brief was often non-existent, and indicates proximity of partnership. Similarly, at the subsequent case study

consultancies, briefs were often either very informal or extremely formal. The uncertain nature of the design process, however, means that what is decided at the start is rarely what is produced at the end.

Several designers talked about 'kick-off' discussions being vital to the commencement of any project. Positive relationships, where clear communication is a key feature, are necessary to ensure that all stakeholders in the project are in agreement about how the project will progress. While briefs were initially vague, discussions and meetings enabled the project trajectory to be firmed-up. A senior manager described these kick-off discussions as 'gelling' the brief (SD1:20).

Upon formalising a brief, the relationship is then crucial to carry the project successfully to completion. However, whether or not the design process is serendipitous and the beneficiary of new ideas, or whether the brief should be followed to initial specification, is dependent on the designer–client relationship. Bruce and Doherty (1993) proposed a classification of types of client–consultancy relationships: the more arm's-length, distant relationships were found to be less trusting of the designer. This research develops those findings to suggest that distant relationships are less receptive to serendipity in the design process. Indeed, a senior designer suggested the relationship affected the entire product development process:

> 'it depends on the client, because if they're going to hold you to that brief … it really depends on the relationship you have' (FD2:6)

7.4.3 Involvement in internal politics

The familiarity that designers have with their clients – the individuals, the brand, its industry, and its competitors – extends to the clients' internal politics. This understanding is crucial in getting the 'go-ahead' for projects. Designers recognise that design projects are marketed internally within the client firm, and to combat this, strategically steer the foundations of the project to appeal to the seniors in command of funding. Designers at all agencies studied made note of internal politics and hierarchies, and recognised that these parties must be 'on board' to ensure project go-ahead.

Various tactics are used to increase security and thereby lessen risk of losing a project or client. In this respect, design and marketing were again symbiotically linked. For instance, designers at frog reiterated in interview their use of internal 'sales pitches' to secure buy-in. Designers' remits are extended to business development tasks: they take control in creating sales pitches for client internal purposes. One principal designer noted in interview her experience of writing project pitches, tailoring them precisely to appeal to the purse string holder:

> 'you're writing it up so that it hits the needs of this other group … so that the money gets released' (FD1:10)

Project pitch is inextricably linked to selling and sales pitch. In convincing the client to invest, the designer remit is tactical, analytic and managerially focused. Without this aspect, business suffers, and therefore consultancies are strategic in tackling risk head-on. Another designer noted that because client teams derive from marketing groups, the sales pitch has a distinctly marketing tinge to it:

> 'typically, because we're working more and more, 9 times out of 10, I'd say, we're working with marketing groups, and the marketing group is paying for this effort, it has to have that flavour much more marketing, that you're selling the idea of it before' (FD2:9)

The longer the relationship, the greater the pressure

In taking responsibility for the client's sanctioning of design projects, designers are becoming acutely aware of the needs of their client-side counterparts. Designers at two consultancies differentiated between first project with a new client and any subsequent projects. During the first project with a new client, designers described a feeling of being "insulated" from internal politics [FD1:5]. However, by the time of second and ensuing projects, pressure builds due to a need to understand more about the company, the players and the clients' desired goals. Similarly, a senior designer at another consultancy described a process of 'probing' a new client to test reaction to their ways of working. By contrast, when understanding is established, reactions are more intuitive:

'when the client is established, the contact especially is established, and it's much more easy to communicate with the client. So it's much more open – you already know how the client is responding to your work or concepts. When the client is new, you're paying much more attention to a larger spectrum of things that you propose to try to see the way the client is reacting' (DW4:2)

Once the relationship is founded, communication is easier; however, there is more pressure on the designer to present work that targets internal needs, and arises from awareness of client reactions. Once the relationship has foundations, the movement of the goalposts puts greater pressure on the designer to shape the process to fit with the internal marketing objective:

'once you're in … now you got to understand "where I have to sell this to" – "who's involved with all the decisions", and you need to help me steer that. So that is a brand new set of challenges' (FD2:5)

Internal marketing and organisational politics are considerations imposed only after the establishment of the relationship. Once trust builds, so does the designers' scope of concern. Another designer referred to internal marketing within the client organisation. By recognising not only the needs of the immediate client, but also a broadened team comprising senior management, designers were in the position to enhance the possibility that their project propositions would be accepted:

'you've got your project team and the client team, right? And they're generally a small subset, right? And then they have an internal marketing need, or a selling need, to be able to sell the outcomes of this programme to – whether it's adjacent silos in the company, or sell it up. And it's not marketing like mass-marketing, but it is an aspect of selling and story-telling that we are often challenged to do in our decks, and our playbooks or whatever the documents are that sell that' (FD1:9)

Designers at Design Partners also identified sales as major components of their jobs, and some equated their roles to a sales pitch (section 6.3.1). As selling becomes an important part of the job, designers' remits expand outside of the traditional realm. Having the interpersonal skill to read and understand the relationship is a cornerstone to any design process.

7.4.4 Bringing clients 'on board': bridging the internal/external divide

The research found that there are limits to the client–designer bond. While relationships can be strong with the immediate client team, design can encounter problems upwards in the client hierarchy, and the divide between the external consultancy and the internal client team can be a barrier to the adoption of designer advice. Some designers spoke about fostering close interpersonal relationships with clients as a conduit to trust, and hence the acceptance of the designer's view within the client organisation. Engaging in a process of 'tutoring' or 'education', designers can manoeuvre to bring the client into the same thought-space as designers.

Having a champion – a 'lynchpin' – within the client organisation is considered to be conducive to the smooth running of the project. Through investing time in 'tutoring' client-side individuals, the designer attempts to encourage ownership and buy-in on the part of the client. The education strategy attempts to create an 'advocate' to speak on behalf of design within the client organisation. This aims to counter any client-side resistance to investment in design by enabling positive filtering of ideas throughout the client organisation. Evidently, while even the closest of relationships could not fully attain this alone, an in-house 'champion' ensured the transmission of ideas that an external resource alone had difficulty in achieving. A senior designer described the advantage of having a champion on the other side:

> 'because they're from internal, they know how to shape the story to talk to your needs' (FD1:11)

Interestingly, the consultancy designer acknowledges his or her limitations in powering a project from the external perspective. However, taking initiative – leadership – again enables this barrier to be surmounted. Convincing the client to tell the project's story as convincingly as the design team can do it, by having the client take ownership, made the project concepts more palatable to the client side. Proximity was used to counter the design–marketing cultural conflict.

The disparity between internal and external sourcing is apparent in this trope. By fostering close relationships and cooperation between client and designer – by involving the lynchpin as an integral part of the design team – design can uphold a

powerful position in the client hierarchy. Close, trusting relations are therefore vital in fostering client buy-in. While some clients do not engage with the designers or project, a senior designer at frog design pointed out that the most successful type of project occurs when the client takes ownership of the work of the consultancy:

> 'it's about them being able to take our ideas and tell them their own story – they have to own it. And a lot of clients don't own it. They're kind of like "oh, bring in frog, they'll do something and I can pass it along". But the most successful is when they own it, when they can tell a story' (FD2:11)

In this example, equality in partnership – where resistance to design ideas is minimal, and where values and understanding are shared – is essential to bring about a successful project. These partnerships can be so close that they become interdependent. The blurring of boundaries between in-house and external resources, as the relationship builds and the design consultancy becomes an important part of the client internal team, can bring about the best type of collaboration according to some designers. At one consultancy, a designer described an early lack of belief, on the part of the client, in design. However, at the other extreme, where the partnership reaches a level of symbiosis where built trust is extremely high, the interviewee revealed that the design team are involved at the highest decision-making level:

> 'in the beginning they might say "ok, let's see what those guys have to say". So after time you might actually reach a level, which is the case with some of our companies, where we are actually inside of the decision-making circle on their side – which is of course the best relationship' (DW2:15)

However, the fuzziness between acting as an in-house or externally contracted consultancy has pitfalls as well as advantages, like an asymmetry in relationship where budgets and deadlines are exploited.

7.4.5 Relationship asymmetry

Corroborating and developing the findings in the primary case study, an asymmetry in relationship was evident at the subsequent case study sites. Like at Design Partners, this asymmetry manifests in a desire on the part of the consultancy to please the client company; for example, in completing work over and above what has initially been

contracted and budgeted for, and working around the clock to meet stringent deadlines.

Designers aim to please the client with the aim of establishing a long-term relationship, and in doing so, short-term loss was acceptable for long-term gain. The fuzzy nature of the front-end of NPD is accountable for financial miscalculation in initial quotes and budgeting. Typically, due to movement of boundaries after briefing, budgets are underestimated from the outset. As the consultancy begins to know more and to gauge better what is the desired outcome of the project, the goalposts shift. Designers are typically keen to deliver a great project over budget rather than a mediocre on-budget project. A senior designer commented that by going over budget, 'we're going to solve the question as best as possible' (FD1:6). Another senior designer described his employer organisation as 'people-pleasing' for this reason:

> 'what we're contracted for is typically under what we deliver. I would say that 9 times out of 10 we're over-delivering on projects. And that is because we're a people-pleasing kind of company' (FD2:6)

It is ironic that consultancies are underpaid because of the quality of ideas. A senior manager at another consultancy quipped: 'we're underpaid even when we're on budget!' (SD1:21). To eliminate deficit, there is the need for design consultancies to strategise to prevent this. The same senior manager described measures taken to prevent loss. By enticing the client with possibility in ideas, it became easier to have budgets increased:

> 'if we see opportunities, then we're pretty good at saying "hey we can do this, but it's going to take this and this and this". So we're pretty good at catching that. But we don't catch it 100% of the time. There are times when we go over budget because of that' (SD1:21–22)

Often it was the case, however, that potential ideas conceived as the result of ongoing work are simply not in the budget or timeframe for the project at hand. However, designers also suggest that ideas cropping up should be explored with the client company as the basis for a possible future project, and this developed the business. Many reported that several projects had been conceived during a past collaboration. Hence communication is a key feature to bringing about long-term, enduring business.

7.4.6 Long-term partner, long-term business

By establishing trust and long-term relationships, repeat custom becomes a likely outcome. Where personalities have bonded, the likelihood is that the client organisation rehires their 'favourite' design consultants. This finding corroborates the primary case study, as well as the research by Bruce and Doherty (1993).

One designer described in interview how the client attitudes towards design can change over the course of several projects. He described how the client can buy in to the approach over time. Tutoring or appreciation of a successful past product can spur client motivation. Similarly, the designer noted that positive relations can result in continued collaboration when personnel change organisations:

> 'suddenly after a while you come there and you see people are excited, they enjoy the relationship, they're motivated, they have a different view on design, and they trust you and say "yes, this is so much fun to work with you!" And this is also the case when the people leave the company, that the second that they're somewhere else, they immediately contact us again and – "oh I'm now at a new company, let's do something together". And that happens very often' (DW2:15)

Similarly, by establishing trust with one unit of the corporation, it is also likely that positive word-of-mouth internally will result in contracts with another unit. Corroborating evidence from Design Partners and its key clients, a senior designer from another consultancy also tracked evidence of business acquisition through contacts:

> 'Once you earn trust, then it's much easier. But once you earn trust with that single group, then you might be opening yourself up to the rest of the company, which often happens' (FD2:8)

While the benefits of positive relationships extend to business development opportunities, another more immediate advantage of the proximity of partnership, of being in tune with the values of the client organisation, is a simpler design process.

Equally, reorganisation and restructuring in the client organisation can result in the loss of ideas, projects and client organisations. One designer lamented a product that had been created for a client, a household global consumer electronics manufacturer. The

product, a revolutionary computer scanner, was ahead of its time; however, expensive technology resulted in its failure on the market. The designer was wistful that this great product was never reinvented or relaunched as technology prices decreased. He concluded that this was due to a restructure on the client side, which resulted in 'letting it go':

> 'it was an amazing piece of technology, but it was extremely expensive. And xxxx reorganised internally – I can't really say it was a failure as much as they let things go – but that was a major disappointment, because this thing was like magic' (SD1:24)

Frustration is a regular occurrence in the work of the designer. Disappointment when ideas are not carried to fruition, or when concepts are not realised according to the designer's desires, is a feature of the job. This is exacerbated by the designer's desire to achieve the best product to answer the brief fully.

7.4.7 Internal disappointments rife

Design consultancy is business, and it seeks to marry the creative, irrational with the rational business side. At all consultancies studied, timelines and budgets are a fact, and designers are skilled in working to them. The pressure of increasing rapidity in product development cycles is accepted; however, designers were often regretful that better ideas could not be realised due to time and money constraints in the process. One senior manager and practising designer described a sense of wistfulness when the design side had conceived new ideas that could not be realised due to deadlines:

> 'very often we can't change the schedule, we can't say "we've got an idea, it's going to take another three months". That typically doesn't happen in the world of design. Which is kind of too bad, because some of those – I think this is probably true of all design groups – some of those ideas may get lost, because they're not conducive to this specific project. Some of those opportunities probably get put in a drawer and never come up again, because you've gotta get from here to here in six months, or four months whatever it is' (SD1:9)

Linearity and predictability are requirements for the clients, but evidently the nonlinear nature of the design process means, depending on NPD type, that schedules decided at the beginning of the project can be speculative. Vagueness in deliverables was a major

sticking point for the designer, and contributed to the marketing–design cultural disconnect, examined in the next section.

Another troublesome business-related gripe for the design profession is rising costs of hiring design consultancies. This can result in the consultancy's early departure from NPD. As a result, it is often the case that final products are not realised according to the designer's original vision, and this can cause frustration and disappointment for those who conceive the initial idea. One designer described regret that money was such an important factor determining project outcome:

> 'it's unfortunate it comes down to money … you often don't have the opportunity to see things as we talked about at the beginning, to see things all the way to build, test, in-market, feedback, iterate and refine those longer-term relationships' (FD2:19)

A range of different types of NPD projects was observed. While early departure from NPD was common at some consultancies, others planned and were contracted to continue overseeing the product until launch. In some cases, consultancies look after the product until manufacture.

Interestingly, the dynamic, evolving nature of consultancy can be a restriction for designers working on a range and variety of projects. A senior designer alluded to a conscious limit on the amount of information that needed to be digested during a project: 'there's a limit, right, and there's a time frame, and so you just need to know enough' (FD2:22). While consultancy offers diversity of experience and industries, the designer cannot have full and complete knowledge. This observation contributes to a wider discussion around the extent of feasible influence wielded on NPD.

7.4.8 Designer–marketer disconnect

While the design consultancies have taken steps to prevent resistance to design investment by, for example, fostering positive, enduring relationships, and engaging the client in projects, the disconnect between the norms of marketing and design surfaced in interview at all of the studios. This misunderstanding of cultures and approach was the cause of tension between designer and client, and manifests in several ways.

The linearity associated with project planning and progression is not compatible with the messy, iterative, unplanned nature of design projects. This is a major sticking point for relations between designers and marketers, and this has been detailed in the design management literature (see section 3.3.1).

The designers interviewed perceived clients as having difficulty with the vagueness of outcome, and lack of concrete evidence to support their investment. Sometimes even the designers themselves struggle with the lack of concrete foundations in the process. One designer described his colleagues as 'brave people, since it takes a lot of guts to sit in front of a white paper and start at the very beginning of a product development process' (DW3:10). A senior designer at another consultancy described the process as 'icky' and 'messy', and lacking in lucidity:

> 'design is ultimately a process, right? It's a process of understanding a question, going through the icky, messy, "I don't know what it's going to become in the end", and then narrowing it down, and whittling it down and coming out with a vision or a thing at the end, whatever it is' (FD1:20)

It is therefore not surprising to find a degree of tension when marketers, the clients, lack sympathy with the designer's approach. While design has evolved, as this thesis suggests, to encompass input from a range of other disciplines – and designers are required to have a familiarity outside of their traditional functional remits – problems are charted to arise when the same breadth is not encountered on the client side. A senior designer described an archetypical client with a business background, who has difficulty in crossing the boundaries to understand approaches outside of his or her range of experience:

> 'the biggest challenge for us is that we kinda hope that we're working with people on the client side that like us, who are broad and have different skill sets, and can understand the technology and marketing and this and that … but often the case is that we're working with some dude who came out of a marketing MBA, thinking in a very traditional marketing way, which is fine, which is great, but can't cross these boundaries as easy as we assume they can cross those boundaries' (FD2:20)

The clash of experiential founding and cultural norms leads to conflict and tension. Both parties are stakeholders in the product development process, but establishing direction and arriving at a tangible endpoint can be a fraught process. However, other interviewees were a little more philosophical about their involvement with the client.

One senior designer acknowledged that the client has the ultimate position of authority, which must be respected:

> 'the client is king. So we need to stand back a little bit and please the client before being able to fulfil our design ambition' (DW3:7)

Nevertheless, the research indicates that the difference in design approach is a source of frustration and disappointment when the design team cannot exercise their creativity in ideal circumstances.

Clash of cultures

The current research indicates that the cultural gulf between design and marketing remains open, and is manifest in many realms. Method of working is a major obstacle. Designers note difficulty in presenting numerous ideas to a client from marketing, which again alludes to disconnect in embracing the nonlinear nature of the design process. Likewise, the marketing predilection for procedures often causes upset to the design process. Designers express disappointment that the marketing approach is imposed on the design supplier. One senior manager and practising designer described it as 'unfortunate' that design groups must follow stages and plans in a process, which ultimately cannot be compartmentalised:

> 'what's a little bit unfortunate is that design has evolved with these procedures that typically all design groups will follow – like phase one will be this, phase two will be that, phase three will be that … there's a project plan, there's a budget, there are methods that get implemented almost by rote' (SD1:9)

At the extreme, frustration can be intense for both parties coping to understand the other side. Another senior designer described a particularly poor project situation where the client was unable to assign any validity to the methodology employed by the designers. The senior designer was particularly critical of the marketing client's narrowness, or 'thinking inside the box'. He perceived a lack of attempt to comprehend the design approach, and this caused intense irritation:

> 'so xxxx, they came to us … first they wanted to think, they wanted to see what thinking outside of their little regimented boxes are, but at the same time, they couldn't get it – they just didn't want to get it. Like, "it's too messy for us". They wanted everything

> backed up, everything "what's your framework for that?" "uhh, we don't have a framework for that – it's just our thing … we'll get to it!" And they're like "agggggh!"'
> (FD2:20)

Likewise, at another consultancy, designers describe difficulty in giving credibility to ideas in the eyes of the client. For the client, interviews and focus groups were mandatory to test the idea. A senior manager was aggravated by the client's insistence on asking for customers' views directly in order to test the consultancy's ideas. For him, the source of a vision has to come from the experience of a design team, rather than from the inexperience of customers:

> 'we have another project that we're sort of grumbling a little bit, because our – and the client is actually great to work with – but we're working with the group within the client who is looking to customers to get opinions. And we're coming back from some of these meetings like "what is the point?" The company or the design team has to have a vision – you can't just go out and do interviews, and expect the vision to come from outside. But they're so … they wanna base their opinions, or their directions, on what customers tell them to a fault, if that makes sense. There's like nothing in their heads other than "let's say what people say"' (SD1:7–8)

This lack of shared vision, a lack of trust in method, created a sense of under-appreciation for the designers: while research was core ingredient in this consultancy's framework, incessant testing at every stage was neither viable nor beneficial. The consultancy prided itself on its method of approach, and strength of opinion, yet conflict occurred when the client's lack of trust was implicit. This final issue leads to another related area: use, types and source of research in the product development process.

Role of research

There was a substantial degree of agreement between consultancies as to what constitutes design research, and how it should be used in practice – there was accord that research forms the foundations of a project. Historically, however, designers had been discouraged from undertaking any type of design research. In essence, their role had been solely to put the skin onto a product conceived by marketing. According to one interviewee, whose experience in design consultancy as a practising industrial designer dates back over 30 years, initial keenness to undertake research as part of the design process was met with scorn by the marketing clients:

> 'we started some early projects in the 1980s even – if we said we wanted to go out to do some design research, that was like a culture clash: "you're designers, whaddya mean? We're the marketing people, we do that", or, you know, "it's not your job to go out and talk to people"' (SD1:2)

As the profession and project requirements broaden, the current trend for design consultancies is to have an internal research division: interviewees at frog and Smart Design both mentioned research arms when describing their company structures. Therefore, both designers and clients prefer a project to have researched and corroborated underpinnings.

However, disagreement between designers and marketers lies in what type of research should be carried out, by what methods, and by whom. Designers at two consultancies noted that clients are becoming especially keen to understand the user, as well as the industry and market factors. This can be attributed to the validation from those organisations whose consumer-centric approach to NPD has reaped significant success, for example Apple Inc. This attitude is a positive development for consultant designers, as it has the potential to increase designer empowerment.

However, despite agreement as to the overarching importance of understanding the user, a further disconnect occurs between designer and marketer. A senior manager was regretful that the client is limiting what the designer can himself or herself undertake as research. While designers' notion of research is far-reaching, the client looks only for research on the market as a whole:

> 'I would think now that most companies are coming to us with this idea that they really need to understand the people, the market, do the fieldwork, etc. One of the downsides, though, is that much of that realisation is still coming from marketing groups. So what you see in a lot of what is called "design research" now, what a lot of designers are doing in terms of design research, is really limited to ethnography, which means interviews. Which in some cases is limited to surveys. Which in some cases is basically marketing research that designers are doing' (SD1:3)

The real division is not associated with qualitative and quantitative forms of research (although designers' weakness in the latter was also noted at some sites). Rather, designers are spending effort in doing broad market research, instead of concentrating on design research; that is, research on the user. The same senior manager noted that

the mix-up between design research and market research on the part of the marketing client group is common and widespread:

> 'I think what's happening out in the field now, it's a lot of that is a little too closely knit with market research. Whereas design research and market research have some real fundamental basic differences that get lost very often' (SD1:3)

An ambiguity, a miscomprehension, about the classification and extent of involvement of the design division in NPD is once more palpable. In this view, design must take an extensive involvement in building the foundations of the project by liaison with the user, but it is all too often implanted into another separate field at the request of marketing. The designer's remit hence broadens to include expertise in other areas, and design's force is being muddled and moulded into a part-marketing remit.

Boundaries between the two disciplines are so undefined that perhaps expertise in each is being transferred, perhaps even diluted, into the other. For the designer, this cross-division applicability has upsides and downsides. On the upside, it enables and implies a more widespread and influential involvement in the product development process. On the downside, that the designer needs to know a little about a lot – a mile wide but an inch deep – means that he or she becomes a 'jack of all trades', without defined expertise in one particular area. Design hence has capacity to become the cement in the construction of the NPD process.

The construction of the design studio personnel is found to combat this concern. In discipline, background and expertise, diversity is embraced. At team level, the tailoring of multidisciplinary units is deployed to cope with broad and increasingly demanding client requests, and this is examined in section 7.5.3.

7.4.9 Conclusion: taking leadership through relationships

This section has described the complexity of the client–designer relationship, and suggests that adequate management of these relationships enables a greater degree of designer NPD leadership. The findings indicate that design consultants prefer close ties as these foster a smoother design process. Significantly they allow a greater degree of

influence in the project outcomes, and the role of the designer depends on the relationship that he or she develops with the client. Design leadership hangs on the 'gelling' of the personalities on client and design teams. A senior manager at one consultancy suggested that the understanding of the client, gleaned through the consultancy–client relationship, paves the way for the extent to which the designer can be involved in any project:

> 'we're trying very much to understand the client very much because our value is probably unfolded in the best way for the client in a consulting relationship … But I think we are very much trying to focus on the consulting with the client which is sometimes very much between the lines, so it might be through talks, it might be understanding where the brand could go, and that depends on how open the client is for our due relationship' (DW2:5)

While relationships can be serendipitous, design consultancies are taking steps to ensure that the cultural divide between the designers and marketers in background and approach is circumvented. For example, teams are tailored for specific projects, and designers liaise with clients strategically to develop client buy-in of design, thereby facilitating positive filtration of design within the client organisation. Using relationships to enable the best design outcomes is the designer's prerogative. Managing the relationship emerges as crucial to NPD smoothness and to design leadership, as well as to the consultancy's business development.

7.5   Finding 6: Reorientation in design consultancy

This thesis suggests that the traditional *modus operandi* of design consultancies is shifting. The findings thus far indicate two main areas of change. Firstly, typical designer skill is expanding to cope with extended and increasingly sophisticated client expectations. Secondly, partnerships with clients are of paramount concern in this style of consulting, and the management of relationships becomes a key component of the designer's business approach. This section deals with the reorientation in the business of design consultancy, as design moves into a new era to take a greater leadership of clients' NPD process. Based on the interpretation of the evidence synthesised in

Evidence Tables 6, 9 and 12 (Table 5.4), it contextualises how this shift is having impact on ways of doing business, and methods of consulting.

7.5.1 Broadening of client requests

A recent trend has seen the diversification of consultancy service offerings. Consultancies offering 'just' product design development services are now outmoded, thanks to the broad scope of expertise offered at the world's top consultancies. IDEO, for example, has departments specialising in communication, interaction, environmental and industrial design, engineering, business design, human factors, content analysis and business development, as well as product design, marketing and manufacturing. At the three subsequent case analysis consultancies, all offer clients industrial design, brand communication and strategy elements.

It is apparent that a spectrum of types of design consultancy is evolving. At one pole, there are those offering purely conceptual, strategic services, and at the other, those offering the functional services of designing, engineering and manufacturing a product conceived by client teams. Between these extremes, some consultancies offer an amalgamation of strategic, functional and practical expertise. This notion is graphed and described at the end of this chapter (section 7.5.6).

Consultancies are in the position to offer clients widened and more varied skills, and this is acknowledged by designers. A principal designer talked about the types of initial question with which a client may approach the consultancy. A hypothetical scenario is a client wishing to produce a new mobile phone, with screens on two sides. She described how the consultancy goes about tailoring a team with the necessary expertise in product design, interaction design, strategy, engineering and research to be able to find the best solution for the client:

> 'they might come to us with a physical question, as well as an on-screen interaction design question. And then we might pull a strategist onto that project to figure out the business needs, market sizing. We might pull probably an engineer on to understand the technology behind it. A product designer to design the phone itself. An interaction designer and design researcher to understand the information, the consumers, the mental model. And a visual designer to do the screens themselves'(FD1:2)

This diversity is not atypical of a design project. While the diversity in background and the transfer of skills acquired in the role of consultant means that designers themselves are gaining a wider breadth of knowledge and skills, this evidence also suggests that the traditional notion of 'designer' is outdated. This theory is expanded in the conclusions chapter.

Moving from a focus on tangible to intangible

Arising from this is the clients' own recognition, even reliance, of the power and potential of design propelling the consultancy into a greater position of authority – leadership – in the NPD process. Another designer spoke about general requests from clients from generic, commodity product segments. Design-savvy clients are willing to open themselves to the new opportunities presented by design:

> 'they're coming here and saying "how do we get people to like our aspirin or buy our aspirin more than other things?" And there's surprisingly a lot of opportunity there, design-wise, to re-investigate some things that have been around for decades. So design is a huge opportunity with relatively low investment with a lot of innovation or return by rethinking certain things' (SD1:16)

This has impact for design deliverables. It is no longer the case that clients' requests centre on the creation of new objects. Several designers spoke about increasing requests for intangible outcomes, for example, the creation of a design 'language' to guide a holistic product design strategy. This is similar to Design Partners' commencement of 'directories' for its key client as a guide for all its suppliers. A designer at another consultancy spoke about clients' requests for design 'platforms':

> 'some companies don't even want to design anything, but they want us to create a design platform, and the deliverable would be a CD. And then the marketing gets much more in the foreground, because they just want to know what we would think their brand would need to succeed the next two or three years out in competition' (DW3:4)

By taking ownership of the strategic dimensions of the design process, the intangibles as well as the tangibles, the designer becomes the medium to steer the client brand. In this respect, the consultancy's role is leader, authority, and client guide. This constitutes part of the shift as designer takes NPD leadership.

7.5.2 Increasing complexity of designing

Design has profound impact on mature products, and creates new value. In the previous section, designers noted their work in creating new meaning for generic products. In catering for these mature sectors, an approach of 'total design for experience' is deployed to reframe the scope in which the product is considered. Examples of this are IDEO's Bank of America savings scheme[5] and the abovementioned work of Smart Design on the aforementioned Ford hybrid interface (discussed in 7.3.4).

These mature product category projects, and others like them, have succeeded in widening the scope of design to create projects far more sophisticated than their predecessors. The result, however, is an increasing complexity in the design process. As clients require a broader and more complicated approach, designers have to become acquainted with a broader spectrum of influencing factors. This complexity contributes to designer NPD leadership situations.

The Smart Design approach, for example, is one that has embraced the user from an early stage of its inception. Its founding partner told me that it was a challenge from the beginning to convince the client. Yet a strong belief in the substance of this approach negated the consequence of the creation of extra work:

> 'we have always said that design is not about the thing, it's about the experience, it's about understanding people, it's about usability – it's not just visual – design is about an entire experience. And in order to design something effectively, it's not about the product, you need to understand people, and you really need to understand your customers' (SD1:3)

Client pressure on designers to deliver is intense. The dynamic nature of consultancy, combined with the strain of speed to market, means that data has to be internalised

[5] IDEO was contracted by the Bank of America in 2005 to 'to attract customers and serve new markets' (ideo.com). The consultancy created the 'Keep the change' initiative. It operates like a piggy bank – when using a Bank of America card, the bill is automatically rounded up to the nearest dollar, and the excess deposited into a savings account

very quickly. A creative director described having to familiarise himself with 'stacks' of data quickly, and then to synthesise a response to it:

> 'you're handed a stack of like, "here are consumer, here's our business, here's our industry", and all of a sudden you've got to like [snaps fingers] you know … because you need to tell the story about it. And I think that is so essential to do, to have that mentality to fully … and it's not just about being able to spit that back out verbatim, it's about being able to filter it and have your point of view on what they have' (FD2:13)

However, there was also the hint of a note of caution. This complexity – broadened requirements, and the need for multi-skilling of designers – was also found to be capable of reaching saturation point. A senior manager linked increasing requirements with less successful design. A spread in focus of considerations can have the negative repercussion of diluting quality:

> 'I think that design has certainly, like anything else, has become much, much more complex. There are many, many more requirements inside companies. Sometimes even to a point where it's too complex, where designers aren't understanding any more. And the design that's coming out of this is not successful, maybe not because the designer has done a bad job, but the requirements were too complicated' (DW2:16)

The proliferation of roles is, in equal parts, advantageous and worrying for design consultancy. Perhaps the idea that design can fail because of complex and broad requirements drives a greater need for organisations to understand, recognise and allow NPD leadership from a holistic standpoint. This thesis suggests that design, with its ability to act as hub – the glue – and listen to all requirements in NPD is in a strong position to assume this role.

7.5.3   Diversification in designer workforce

As consultancies face broader, atypical and intangible client requests – and simultaneously extend their offerings to offer pan-NPD consulting expertise – the consultancy workforce is also diversifying to take account of these changes. This is found to be happening at team level, as well as on a micro, individual level.

Team composition: jockeying the 'right people for the right projects'

Team composition is a significant area used to cope with the diverse array of projects. Teams at the international consultancies are dynamic, and are handpicked to provide the necessary expertise to clients. Skills, experience and personality are the key considerations in the selection process. The ability to build relationships is a general, intangible skill that is of supreme importance. One interviewee remarked that the consultancy 'tends to hire people who're pretty good communicators, and are able to establish fairly good personal relationships' (FD1:11). The same principal designer, who is managerially active in the team selection process, reinforced that a 'mix and match' approach is deployed to guarantee suitable expertise on specific projects:

> 'a company comes to us with a question, and we pick from among our skill sets to find a way to answer the question' (FD1:3)

While in theory this approach is satisfactory, in practice it is organisationally very complex. Another manager was regretful that often the 'right' people for the 'right' projects were unobtainable due to prior project commitments:

> 'we sometimes have to jockey people around in order to get the right person for the right project, but it often comes down to who's there' (FD2:16)

Customising teams in terms of personality, experience, skill and interest is best practice; in reality this is difficult to exercise.

Broadened requirements, but more specialised individual skills

Consultant designers accumulate a broad general knowledge, yet design consultancies are shifting to offer a broadened array of services. Paradoxically, this specialised set of offerings requires specialised designers. In coping with this trend, one senior designer described a recent shift his consultancy was making to expand, by employing designers specialised in one particular area rather than the typical 'all-rounders':

> 'as we've gotten bigger, we've gotten more specialised skills sets, and we hire for those specialised skill sets … so when we're looking for a visual designer with Flash skills, we go out and try to find the best one. Whereas four years ago it would be like "well a

Flash designer, who also knows a little bit about business strategy, who also knows a little bit about industrial design, who can also go out and build their own car"' (FD2:14)

This is disputed by other designers; for example, another at frog design told me: 'I still think [consultancy] strives for that broad generalist, but it's like now we need someone who can really *rock*' (FD1:15). While the designer's knowledge extends to take account of the wider areas of interest of the business, the consultancy as an entity is specialising in many more disciplines than just industrial design. The creation of specialised groups (for example, anthropology, interaction design or design research) or business units (for example, Smart Design's *Femme Den* squad looks in particular at issues surrounding gender and design) helps to cope. At another consultancy, designers spoke about a 'mentoring' scheme that allows non-experts to appropriate knowledge and skill from experts in a 'learning by doing' way during the project work.

Ironically, it is soft skills – personality, passions and interests – that are generally heralded as key factors in the process of hiring new designers, rather than the hard skills – drawing, software mastery, or sculpting – accumulated through education and experience. As highlighted earlier, the ability to form relationships and to act as a 'sponge' absorbing insight and experience is a key quality desired by expanding consultancies. For a senior manager interviewed, the hard skill sets are just 'like a medium for getting to where you want to be' (SD1:14). He emphasised that he would prefer to hire a candidate who oozes a passion for design, rather than another who has a lot of the traditional, hard skills. This evidence strengthens the thesis that design is gravitating towards a state where it is acts in a consultative, strategic capacity, rather than a purely functional orientation.

Indeed, personality and passion are attributes of chief importance. Passion for the job is evident, mirroring the findings of the first case study. Designers really care about their work, and are often pedantic about the finest details of it. An interviewee at Smart Design, for example, spoke about the creation of the Good Grips kitchen utensils for OXO International. The peeler (Figure 7.7) the first of the product family line, was agonised over, not just for the now infamous handle (modelled on a bicycle handlebar grip), but also for the blade. The designer told me about the painstaking analysis undertaken to get the blade just right:

'we put a lot of work into exactly how much carrot gets peeled away, and we had it down to tenths, hundreds, of a millimetre of that blade' (SD1:23)

Figure 7.7: OXO International Good Grips 'Peeler Julienne' by Smart Design (1990)

Source: smartdesignworldwide.com

A professionalisation in design

The widened employee group is the basis for a professionalisation of design, which is, ironically, beyond the traditional scope of design. Designers are encouraged to self-develop. For example, like Design Partners' MD's enrolment on the executive masters course, an interviewee at DesignworksUSA had recently completed an MBA, indicating a recognition of ill-equipment to cope with the diverse and dynamic range of dynamic design–business interfaces, as well as a respect for the value in formal management training. On detailing his motivations to do an MBA, he described the need to understand unequivocally the greater business context of the client:

'you have to understand your client. And if you don't understand the situation, his holistic situation that he's in, probably you'll have less answers in terms of a design service. Design after all is a service, but design is a hard service, as is engineering and architecture. And as a hard service provider, you can provide design, you can provide something else, so design is a service that is integrated in a holistic economical way. We are part of service creation, we are part of product creation. Now we have to understand the marketing side, the development side, and I did an MBA to better understand my surroundings' (DW2:11)

Despite this and the gravitation towards the tasks of marketing – the 'business' of design – education and the training of young designers is by and large slow to adapt to the enlarged remit.

7.5.4 Designer background and skill sets: a case of 'mouldy fig'

Designer backgrounds are changing and becoming more varied, and definitions of the traditional 'designer' are becoming outdated. At the 2010 DRS conference, Victor Margolin proclaimed that the conventional idea of the designer is 'mouldy fig', and this thesis suggests a shift in new incumbents to the discipline.

The trend for design work and client requests diverging to a greater extent from the norms of design projects is rendering the traditional hard skills less significant. Hard skills possessed by designers are varied, and the 'jockeying' of personnel between projects copes with diverse requests. Who is considered a 'designer' is ambiguous – personnel in all business groups are generally termed 'designers'. Interviewees acting in senior design roles at the studied US consultancies have backgrounds in the fine arts and anthropology, as well as more traditional product design. In Germany, recruitment was more conventional: young recruits came from design-related courses across Europe, including transport design, industrial design and design engineering.

As industrial design consultancies shift their focus from product design to a combination of product, communication and strategy offerings, it follows that their workforce is also more diverse. A senior designer commented that the job title 'designer' now refers to a wide variety of things. Design disciplines, while specialist in dealing with one type of activity, no longer require a consistent set of hard skills. 'Designer' is an encompassing term:

> 'if we walk round the office, every single person has a completely different background. A completely different hard skill set, even though you might call them all – this interaction designer had, that interaction designer had – all have completely different skill sets' (FD2:15)

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While design was once visual, it is opening into areas far removed. Though projects may be diverse, a common theme uniting the profession is an understanding that the overarching objective of a project is holistic – projects do not create just isolated products, but rather have implications far beyond a physical object. For another principal designer, the role of the designer is not about the ability to create a product. It is far broader, taking a bigger picture into consideration:

> 'the designer broadly defined is about understanding the needs of a product broadly – not just the corporate requirements, not just the market requirement, but the consumer requirements, where things are going – it's about having that big picture, that big story, and being able to bring that to life through the product' (FD1:19–20)

While part of the problem in defining 'designer' stems from the ambiguity of the discipline itself, it is exacerbated by the designer's new role in consultancy. The role of the designer has moved from being a fulfiller of stipulated, functional services to one that is far more strategic and quasi-marketer in its scope, and that leaves previous connotations outmoded. Finding a definition to please all branches of the profession will undoubtedly prove as thorny as defining the profession itself.

7.5.5 Finding balance between front-end consulting and back-end service providing

While this research points to a more extensive design involvement at the front and middle stages of NPD, advisory in nature, design consultancy input in the operational concerns of manufacture is decreasing. This is often due to restraints connected to contracting a consultancy throughout the NPD process. The hiring of consultancies is extremely expensive, especially in the recessionary climate. Depending on clients' design focus, it is typical to recruit specialists for front-end and back-end activities.

At one consultancy, expertise has veered sharply towards the strategic and conceptual front-end tasks. In this instance, production and manufacturing activities are less important for the consultancy; for example, there is no on-site prototyping facility. A senior designer explained that the consultancy's fees are high, and this means they are contracted for specific parts of projects. Often the consultancy's task is to conceive an

idea or identify a problem. Handover to another agency or in-house team ensues, who bring the vision to reality. In the designer's opinion, her agency is:

> '… an expensive group to have in, and helping you out with a question you're asking – once you have specifications, it's usually less expensive to find a more development-focused house to build out those specifications, or an internal team' (FD1:4)

Developing this point, the research finds that design consultancies can come in the form of front-end specialists, who champion the conceptualisation and premeditated sections, or back-end specialists, whose expertise is in making the product technically feasible. However, the division between the front-end conceptual consultant and the back-end service provider is not clear-cut. Other consultancies manage an equilibrium between the two aspects. Design Partners and Smart Design, for example, both have an on-site model shop, with dedicated staff, and both are involved throughout NPD. This means that both regularly review initial production models, both send staff to production sites to ensure manufacturing quality, and both care deeply about the physical technicalities of project outcomes. A senior manager told me his consultancy often has staff at the site of manufacture to make immediate recommendations to production models:

> 'we may recommend tweaks – something may have happened in the final production … we have people actually on site, at the point of production, where the factory may be – that happens very often' (SD1:14)

For some consultancies, the seemingly opposed front- and back-ends of design are not exclusive. These consultancies meld the two aspects by hiring a varied range of design personnel, allowing for the creation of dynamic teams.

Specialising in one at the expense of the other can be problematic. This research suggests that design NPD leadership encompasses an amalgamation of the functional and the conceptual. A 'both–and' inclusionary approach is valuable in design consulting in NPD. The concept will never come to market without development and production, and vice versa. A senior manager at one consultancy described inter-reliance in realising design fit for the market:

> 'I think that one cannot live without the other. I think if you just provide a service, but there's no consulting part in it, then of course that happens as well. You tell somebody "paint my walls in green" and he paints your walls in green – and doesn't care if that

fits or not. And the same part also for the consulting side – you cannot consult without actually delivering a service' (DW2:15)

7.5.6 Conclusion: leadership and the changing nature of design consulting

This research uncovers transition and change in the business of design consulting. A key finding concerns the opening and widening of design consultancy. As products become more complex, as consumers and their expectations become more difficult to satisfy, clients are requiring greater value to be embedded in the objects they produce. This challenge is falling on the shoulders of design.

Changing demands are propelling design consultancy into a new era. The traditional focus on merely producing objects is being transformed to the strategic considerations of building client brands across the NPD process. Consultancies are broadening their offering to include expertise not just in industrial design, but also in a range of other related disciplines that assist in creating holistic messages. In doing so, consultancies are also expanding in terms of in-house personnel skill sets, and notions of the traditional design employee are rapidly changing.

The trend is for consultancies to offer a greater range of conceptual analysis, and have greater input during the early and development phases of NPD, rather than undertaking solely operational development later in the process, where the product is already conceived. In doing so, design has greater input in framing the project, and takes a greater control – leadership – of it.

A variation in types of design NPD leadership emerges, detailed in Figure 7.8. Some consultancies – those that are 'front-end heavy' – seek to specialise in a genre of conceptual, creative-driven front-end leadership. Others have extended input across the NPD process, and can be termed 'strategically–functionally balanced'. Being involved earlier means significant input in problem definition, and those that aim to provide a strategic–functional balance have greater control of product until launch.

<u>**Figure 7.8: Types of NPD leadership**</u>

High

Level of
conceptual
focus

Front-end heavy

"We are a global
innovation firm"
(frog design)

Strategically-functionally balanced

"We create informed and inspired design
for people and memorable brands for
our clients" (Smart Design)

Pan-NPD involved

"We are a global design
consultancy with over 35
years experience, offering a
unique suite of design
services" (DesignworksUSA)

Reorienting from functional to strategic

"Manifest our clients' brand through
great product design" (Design Partners)

Low   *High*

Scope of NPD
inclusion (front-
and back-end)

Source: the researcher

Ironically, it is by embracing the art of business, and the craft of the marketer, that the
consultancies have taken leadership. That the design consultancies' mottos embraced
the terminology of marketing is revelatory: the shift from the creation of tangible form
to the creation of intangible brands is palpable.

Primary 'exploratory' case		Subsequent 'critical' cases		Integration and discussion
Finding 1: A broadened designer remit	→	*Finding 4:* Taking ownership of NPD	→	*Designer's work*
Finding 2: Interface of designer and client	→	*Finding 5:* Value of designer–client interfaces	→	*Designer–client interface*
Finding 3: A changing business model at Design Partners	→	*Finding 6:* A reorientation in design consultancy	→	*Design consultancies*

8.1   Introduction

In this chapter, the six original findings are integrated and 'mined' to gain deeper understanding of designer NPD involvement. Three integrated themes from the six data sets are discussed. The first of these concerns the designer's work, and builds on Findings 1 and 4. The second looks at the designer–client interface, and builds on Findings 2 and 5. The third is the business of design consultancy, arising from Findings 3 and 6. Table 8.1 summarises and incorporates the sets of findings under the three themes.

Together, these integrated themes suggest patterns of change in the nature of consultancy design and designer's input in NPD. Models of designer NPD involvement are developed in this chapter from the integrated themes. These models are used to generalise and understand how designers and design consultancies are navigating a transition towards design leadership.

Table 8.1: Mapping design 'leadership' across four case study sites

	DP	DW	SD	fd
Integrated theme 1: Designer's work (*Findings 1 and 4)*				
Designer assumes part role of marketer				
Speaking language of marketing	✔	✔		✔
Translation of intangible story into tangible product	✔	✔		
Designer as strategy consultant				
Shaping brand through product	✔		✔	
Guidance of client decisions	✔	✔	✔	✔
Importance of assertion and confidence in projects			✔	
Backing up position through research, speaking the language of the marketer	✔	✔	✔	✔
Designer shapes NPD direction				
Designer trusted to extend knowledge to client project from previous experience		✔		✔
Designer writes or reshapes vague briefs	✔		✔	✔
Takes responsibility to conduct own style of research	✔		✔	✔
Designer 'all-rounder' in NPD				
Significant time split between practical design work and management tasks	✔	✔	✔	✔
Powerful coordinator of multidisciplinary NPD effort	✔		✔	
Integrated theme 2: Designer–client interface *(Findings 2 and 5)*				
The longer the relationship, the better the project				
Educating the client			✔	✔
The longer the relationship lasts, the smoother the process	✔	✔	✔	
Knowing the client means designer can 'sell' projects to their needs	✔			✔
Being 'inside' the client's decision-making circle enhances project	✔	✔		
Asymmetry in relationship, aiming to deliver great design				
Over-delivery/not getting paid enough	✔	✔	✔	✔
Committing to extra work	✔		✔	✔
The designer–marketer disconnect				
Designer emotionally bonds to project	✔		✔	✔
Disillusion when product isn't realised according to designer vision	✔		✔	✔
Disappointment in the disconnection between designers and marketers	✔	✔	✔	✔
'Selling' design research validity to client	✔		✔	
Inseparability of personality from business				
Designer uses personal rapport to generate business opportunities	✔	✔		✔
Personal relationship is conduit of trust in consultancy		✔	✔	✔
'Right people for the right project'	✔			✔
Integrated theme 3: Design consultancy business *(Findings 3 and 6)*				
Increasing complexity of design process				
Client requests are broad, strategic	✔	✔	✔	✔
Deliverables may not be tangible product-based		✔		✔
Offering of extra services				
Marketing services (e.g. segmentation, research)	✔	✔	✔	✔
Brand direction	✔	✔	✔	✔
Project management	✔		✔	✔
Supplier liaison	✔		✔	
NPD process specialism				
Services offered across NPD process	✔	✔	✔	✔
Change in focus – more conceptual than functional involvement				✔
Expansion in areas of specialist expertise				
Diversity of employees outside of industrial design graduates			✔	✔
Moving from marketing-led NPD to design leadership				
Consultancy maxim emphasis of the strategic over the functional	✔	✔	✔	✔

DP: Design Partners   DW: DesignworksUSA   SD: Smart Design   fd: frog design

Source: based on the Evidence Tables detailed in Table 5.4, and the findings from Chapters 6 and 7

8.2   Integrated theme 1: Designer's work

The first of the integrated themes concerns the designer's work, and his/her involvement in the NPD process. Finding 1 suggests a broadened designer remit, while Finding 4 posits that the designer is taking a greater ownership of NPD. Mining the data in these two findings, it emerges that designers' skill sets are enlarging to cope with a broadened role, and they are therefore taking responsibility and greater control of a broad range of activities across the NPD process. The role is mutating into one of increasing involvement and complexity.

The research undertaken at the four design consultancies enabled insight into a wide range of projects, clients, and designer approaches. A number of different manifestations of the designer's role were observed. Design's involvement in NPD varied depending on type of NPD. I identify five different incarnations of the designer's work, and Table 8.2 describes this taxonomy of designer involvement corresponding to different types of NPD, especially in terms of complexity of designer responsibility. The taxonomy develops the idea that incremental NPD can vary from the simplistic to the extremely complex. It organises NPD types from the more basic, linear projects (the 'tweaks') to the most complex ('new opportunities').

Table 8.2: Designer's involvement by NPD type

Type of NPD	Description	Designer input
New opportunity	• The most complex form of mature NPD – a product new to the firm created either for a new market or for existing customers. • Differs from discontinuous NPD: a product new to the firm may not be frame-breaking, or 'new to the world'. • Risky, and requiring the most investment on the part of the client firm.	• Crucial involvement in identifying new opportunities – design's roots (wicked problems, creating for the future) leave it well placed to identify new opportunities. • Work closely with client: where trust is high, greater degrees of autonomy awarded. • Strategic design insight can highlight the next steps in a client's business plan. • Designers are leaders, acting in an advisory capacity to ascertain appropriate and lucrative opportunities for client. • Designer is business-savvy, and by adopting business lingo, designers are more credible for the client. • Consultancy design is particularly effective at identifying new opportunities, due to external standpoint.
Value proposition	• A redefined story behind an existing product makes it relevant on the market for a differentiated set of values. • Value is derived from new levels (e.g. economic, environmental, functional, aesthetic or symbolic appeal). • Involves collaboration between design and marketing propositions to refocus product value proposition.	• Design plays a crucial role in an integrated team. • Designers deeply involved in the praxis of marketing. • Involvement is highly strategic in identifying and making tangible the value of the product.
DNA improvement	• Requires a significant physical alteration of an existing product in terms of features, materials or style. • Product is typically at the maturity stages of its lifecycle. • Possible triggers are changes in fashion or trend forecasts. • Company aims to enhance the product's relevancy in a changing market, and therefore to continue sales.	• Input is required from design, as a player in a multidisciplinary team, to rework the existing stylistic product properties. • The same designers may or may not have designed the original product. • Examples: 'retro' car designs – Fiat 500, VW Beetle
Physical reshape	• Minor physical technical alteration to an existing product. • Triggered by client-side market research or customer feedback on the already launched product, e.g. product performance. • Can also be triggered from the data generated by a (recently) launched product, or in response to changing economic conditions (e.g. production flaw, the need to lower costs of manufacture).	• Minimal designer involvement • Minor superficial adjustments made to an existing product by way of technical alteration (e.g. CAM file)
Tweak	• The simplest and most generic form of NPD. • Minor superficial and decorative modifications of existing products, e.g. colour. • Triggered as a client response to declining sales figures.	• Designer input is limited. • Designer works in response to specific client request.

Source: based on Finding 1 and 4 from Chapters 6 and 7 (as well as Evidence Tables 1, 4, 7 and 10)

Several issues on designer NPD input emerge from the taxonomy. First, it is interesting to note that the NPD trigger varies depending on NPD complexity. The most simplistic types of NPD usually result from client sales data. By contrast, designers often act proactively to generate the more complex forms of new products. Developing the proposition of Perks et al. (2005), a shift from design as a functional specialism to design as leader becomes evident.

Second, there is a transition across the spectrum of NPD project complexity from designers acting solely as service providers to authoritative design consultants. Designers are renowned as excelling in the techniques of idea generation. It is therefore easy to understand why they gain greater authority in complex, nonlinear NPD forms. The designers studied in this research recurrently recounted situations where they had suggested opportunities not yet considered by the client. For example, in redesigning the Ford Hybrid instrument cluster, Smart Design was initially asked to design a regular analogue dashboard. The designers, however, conceived of the SmartGauge LCD interface (see section 7.3.4), the first such car speedometer technology. In this example, designers proactively created a new opportunity by rejuvenating a mature product through unique insights on both client and user. Design is therefore suggested to have extensive, significant and decisive input in the identification of opportunities.

Third, as designers take greater responsibility for clients, their involvement moves into the spotlight. An interviewee, the director of strategy, research and strategic partnering at DesignworksUSA, suggested that the greater the design capabilities within the client firm, the more specific was their brief, or instructions:

> 'I'd say the more design-minded, or the more design expertise they have, the more formulated and precise the request' (DW1:2)

This implies that it is design expertise that identifies product opportunities, and hence focuses the NPD process. Those clients that have design capabilities are already developed in their knowledge of what is required. In contrast, at the simplest level of NPD, designers respond to clients, and are paid to carry out explicit instructions. In this role, designers are purely service providers, having little creative input. They are of

negligible importance, operating only 'behind the scenes'. This notion can also be attributed to the fuzziness of client requests for new products. The research found that the client is often unsure about potential opportunities and abdicates responsibility – 'I'll know it when I see it' syndrome is discussed in section 6.3.7. Therefore the onus is handed to designers, and their input becomes paramount. Designers can conceive the idea, and have a crucial role in nurturing and developing it, and this is a key feature in leadership.
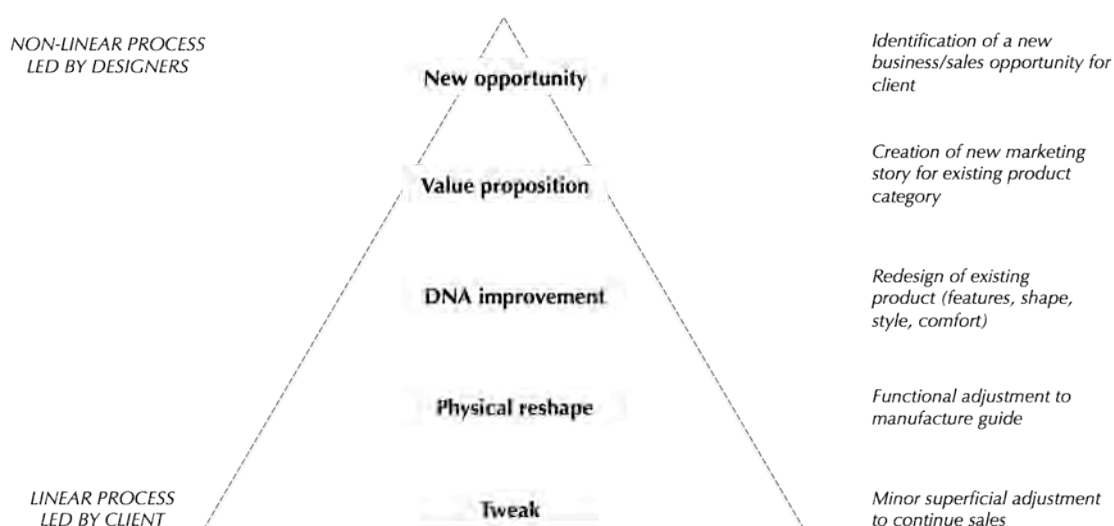
Fourth, the taxonomy explicitly exposes the link between design and product lifecycle (PLC), and its associated tensions. As an object reaches saturation in an overcrowded market, the typical response of its manufacturer is to update and extend the family lines to reinvigorate dwindling sales figures (tweaking), and so on through the spectrum until saturation is achieved. In his book *The Language of Things*, Sudjic (2008) notes that consumption is driven by ever-proliferating product ranges offered by manufacturing companies. Televisions, for example, have expanded from 24- to 60-inch screens, forcing older models into obsolescence. Availability of even bigger (or smaller), better products drives consumer desire for the latest model. Consumers are unwittingly compelled to buy-in through planned obsolescence and product failure arising from poor quality. For example, mobile phones and mp3 players are engineered to last only until the next generation is launched.

There is, however, a growing opposition to the culture of mass-production, in part spurred by the recessionary economy where consumers seek greater value-add in products. Design's role as accomplice in the production has been placed in the spotlight as sustainable modes of production become expected (Esslinger, 2009). This ruthless corporate machine ethic can leave designers frustrated and disillusioned in their chosen profession, and contributes to the tension between design's overarching societal purpose and responsibility to the employer, as hinted at in the discussion on designer's role in marketing and selling (section 6.3.5). The global economic crisis leaves design in the position to be able to change notions of value in the throwaway society. Measures to tackle unsustainable production include the use of sustainable, recyclable materials, and design for disassembly (Margolin and Margolin, 2004). In the reversal of the traditional hierarchy of design and marketing, design's greater autonomy in NPD has the potential to make a greener future for the sourcing, manufacture, distribution and recycling of objects.

8.2.1 A model of designer NPD input: increasing responsibility

The integration of the findings suggests movement towards more complex, nonlinear, and designer-led NPD. It is suggested that designers, in their mutating, diversifying, quasi-marketing role, have more value in the more complex forms of NPD. Figure 8.1, based on Finding 1 and 4 (in turn based on interpretations made from Evidence Tables 1, 4, 7 and 10), presents a model that summarises the taxonomy of NPD types.

Figure 8.1: Types of NPD and designer's respective input

NON-LINEAR PROCESS LED BY DESIGNERS		Identification of a new business/sales opportunity for client
	New opportunity	
	Value proposition	Creation of new marketing story for existing product category
	DNA improvement	Redesign of existing product (features, shape, style, comfort)
	Physical reshape	Functional adjustment to manufacture guide
LINEAR PROCESS LED BY CLIENT	Tweak	Minor superficial adjustment to continue sales

Source: based on Finding 1 and 4 from Chapters 6 and 7 (as well as Evidence Tables 1, 4, 7 and 10)

At the case study consultancies, there was eagerness on the part of the consultant designers to embrace and drive NPD. There was a trend towards designers assuming in-depth involvement in more complex forms of NPD, shown at the upper echelons of the model. As a result, the designer's involvement is increasing in diversity and depth. Buchanan's (2001) theory that design is moving into a 'fourth order', where form, function and materials are only one part of a wider investigation conducted by

designers to discover what is 'useful, useable and desirable', finds resonance and validity in the findings of this research.

The model acts as a guide for designers, design managers and clients. In a quest for more transparency in design pitching, it is suggested that such a framework can assist designers in their negotiations with clients, and prevent the types of asymmetry in pitch versus what is delivered, as described in Findings 2 and 5.

8.3   Integrated theme 2: Designer–client interface

The second of the integrated themes concerns the interface between the designer and client. Findings 2 and 5 discuss the intricacies of the designer–client partnership. Mining the data in these two findings, it emerges that clarity, and extent of dyadic 'partnership', in the designer–client relationship allows smoother project progression. In some projects, clients can require greater input and leadership from the designer, while in others, the client may be more specific and controlling of the role that designer fulfils. A gap emerges between notions of the designer as an autonomous authority who takes NPD leadership, versus the designer as fulfiller of service-providing duties.

The designer's role in terms of interface with the client, and required skill sets, is summarised in the typology presented in Table 8.3, and identifies five different types of interface. At the broadest and most complex level of designer involvement, designers are leaders of the client. The client values their input, and the designer is allowed to assume the role of consultant, undertaking a prominent, insightful and important position in NPD. At the opposite end, the designer is follower of the client's lead. Design fulfils specific tasks, and is a superficial add-on to NPD.

Table 8.3: Typology of designer roles in NPD

Designer's NPD role	Designer-client interface	Required skill sets
Leader	• Independent, sophisticated, extensive involvement across NPD. • Complex input in conceiving project foundations. • Develop ideas. • Can be involved until product launch, and activities may continue to post-launch. • Liaison with manufacturer.	• Brainstorming and idea generation to create project brief. • Analysis of users, buyers, client, market. • Marketing techniques of segmentation, demographics. • Knowledge of business and strategy. • Data interpretation and synthesis. • Project management – coordination of wider team, and internal project. • Persuade, and 'sell' to, client. • Also functional design work – concept development, rendering, prototyping. • Interpersonal and team-building expertise.
Facilitator	• Intense involvement from beginning of NPD. • Designer can be proactive. • Designer interprets a loose brief. • Client holds final sway, and they work together closely (e.g. on conceiving the project foundations).	• Project and team management activities. • Personal engagement with client team. • Tailor picking of teams. • Gathering of insight and analysis of client team. • Responsibility for making the business case for the project. • Imbue relevant value in product's physical form. • Strategic rather than functional role.
Integrator/ mover	• Analytical and functional input under client guidance. • Move in tandem with the wider NPD team (designers do not trigger NPD, conceive the idea or lead the process). • Some autonomy to highlight design-related trends, verified by client.	• Identify, with the client, opportunities to enhance products. • Highlighting of ways to improve product (e.g. identification of design trends, product aesthetic trends). • Analytical input limited to product surface strategy.
Reactor	• Late, scant, largely technical design involvement. • Marginal involvement limited to functional areas. • May belong to back-end consultancy. • Designer tied to client's vision. • React and respond to client desires.	• Designers recruited for technical know-how. • Carry out minor technical improvements in response to client's brief. • Designer is functional service provider.
Follower	• Little involvement of low complexity. • Simplistic tasks to fulfil, often behind the scenes. • Projects are next generations of an existing product. • Designers precisely follow specific client instructions.	• Purely functional role. • Following not requiring any substantial analysis.

Source: based Findings 2 and 5 from Chapters 6 and 7 (as well as on Evidence Tables 2, 5, 8 and 11)

Evidence from the case consultancies indicates that design is being invited to have NPD input from the earliest stages and this continues throughout NPD. As the designer's remit and skill-set expands to areas outside of the traditional boundaries of design – for example, in marketing and business strategy issues – he/she has capability to lead across the NPD process. For example, (1) at the exploration stage of NPD, designers take responsibility to segment the market, tailor teams, and synthesise tangible and intangible research and insight. At (2) concept development, they form briefs, estimate budgets, and create holistic concepts in line with the client brand. At (3) concept selection stage, designers guide clients and manage their expectations, and coordinate budgets and schedules. During (4) design development, they manage the project and strategise on product surface finishes. During (5) production, designers liaise with vendors, review production models and sign-off pre-production. Finally, they can be involved until the (6) post-launch phase, with testing, brand development and re-design research. Designers use a unique mix of explicit and tacit knowledge and experience to bring about understanding of the client firm, its objectives, the market and the user.

While the extension of the designer's remit is part of an explanation for this trend, other factors also have sway. First, the research finds that client desires, briefs and instructions are often hazy. This lends credence to the suggestion earlier in this thesis that the business and marketing approach alone is becoming slow and inflexible to the speedy, dynamic and quickly evolving market pressures, and increasing complexities of NPD. Consumer demands are broad and changing, production technologies are becoming more sophisticated, and trends are quickly altering thanks to global communications. Satisfaction and value are being found by approaches beyond the conventional principles of marketing. The design approach – its unique blend of the functional and the conceptual in sensing the market, and to offer novel portfolios of competencies – is flexible, and is surpassing conventional marketing and business approaches to NPD.

Second, this added complexity in NPD and a greater importance of design create a situation where design is moving into a position of greater prominence and respect within organisations. This means that designers are more autonomous, the client giving

the freedom to work proactively to conceive new ideas. Rather than answering to the client's requests, there is greater emphasis on the designer to suggest and shape ideas early in the project – to collaborate with an open, trusting client. Design is in the position to propel an extremely nonlinear design process.

Third, early NPD involvement, besides invoking designer responsibility through the parenting and nurturing of a new idea, also enhances the esteem with which design is held client-side. The designer becomes an authority in the NPD process, and is a lynchpin in coordinating the input of a range of stakeholders.

8.3.1 A model of the designer–client interface

Clear linkages emerge in NPD between project complexity, designer involvement and responsibility, and the status which the client assigns to design. A second integrative model is presented in Figure 8.2, capturing the variation in the role fulfilled by designers in relation to their interface with the client. An inverted pyramidal structure demonstrates the breadth and scope of designer participation in NPD. The more complex the project, the greater is the need for more extensive and earlier design involvement. The constellation of the partnership between designer and client is a crucial mediator of designer involvement and control exercised in NPD. This relationship influences designer trust and empowerment, and the extent to which designers are consultants or service providers. The model is useful for designers, design managers and clients in guiding the project. It allows clear structuring of responsibility and roles played by the design consultants.

Figure 8.2: Typology of designer – client interface
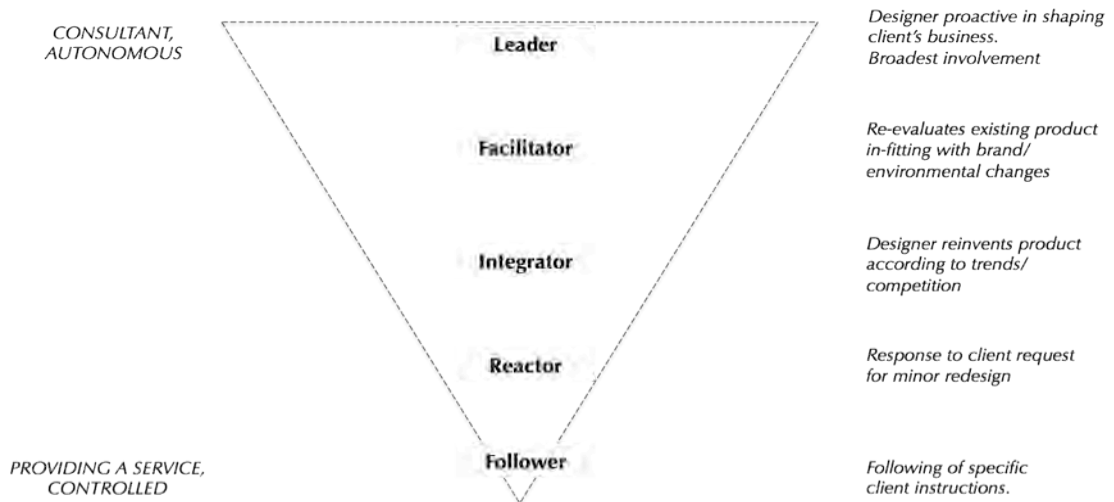
Source: based Findings 2 and 5 from Chapters 6 and 7 (as well as on Evidence Tables 2, 5, 8 and 11)

8.4 Integrated theme 3: Reconfiguring the design consultancy

Together, the themes emerging in this chapter – an enlarged designer remit and responsibility across NPD, and the trend for complex NPD led by the designer – highlight a shift in the nature of design consultancy. Consultancies are offering clients extra services, and are taking greater ownership of their NPD processes. This research outlines an overall reorientation from a passive, and often late, design inclusion in NPD where client dictates direction, to one of more rounded and instrumental designer input.

Design leadership denotes the assumption of a pivotal coordinating position in the process, resulting in an extensive and early involvement. The designer is thereby moving from influencing only the functional and surface attributes of products to having input that is significant, important and decisive. The designer uses wide-reaching skill to become expert on client business, brand and strategy, and thereby acts as a consultative authority. In design leadership, partnerships with clients are close and symbiotic, and designers are highly regarded and trusted.

As designers engage in quasi-marketing tasks, they seize significantly greater freedom, control and ownership of NPD. Ironically, by becoming more marketing-led and business-aware, as designers embrace the language and craft of marketing, the design consultancy moves into a position where it propels its clients' NPD strategy, and oftentimes even its brand and corporate strategies. Paradoxically, blurred boundaries and close collaborations mean greater autonomy. This marks the move from the designer as a service provider to a design authority, from follower to leader, and from marketing-led NPD to designer leadership.

8.4.1 Moving to greater design leadership

The model in Figure 8.3 seeks to describe the shift to design leadership, and acts as a guide in mapping types of designer NPD involvement. The model indicates a range of design incarnations in NPD. At one pole, where projects are more complex, the client's reliance on the designer is greater, requiring the designer to take a predominant role. Design has significantly higher stakes in product conception. Being involved from the nascent stages of the process allows greater freedom, control and ownership. As design's influence on the NPD project becomes greater, the client buys in to design leadership. Conversely, where projects are at their most simple and generic, the necessity and autonomy of design are significantly reduced. This is the case even where relationships are enduring. Designers are, in effect, fulfilling the role of the service providers. Briefs are monologues, not open to interpretation, and designers carry out tasks exactly to the explicit requests of clients. The need for close designer–client communication is hence reduced. Between the two poles, design exists in mid-ownership of NPD. It is one player in the multidisciplinary NPD team. It retains some degree of authority on the surface design strategy, yet still ultimately answers to the client's brief.

Where consumers are demanding, where competition is global, and where technologies are increasingly sophisticated, there is a need for design and designers to have room for manoeuvre in NPD. It is suggested that this model offers guidance for clients, designers and design managers at consultancies navigating the challenging, dynamic current competitive arena.
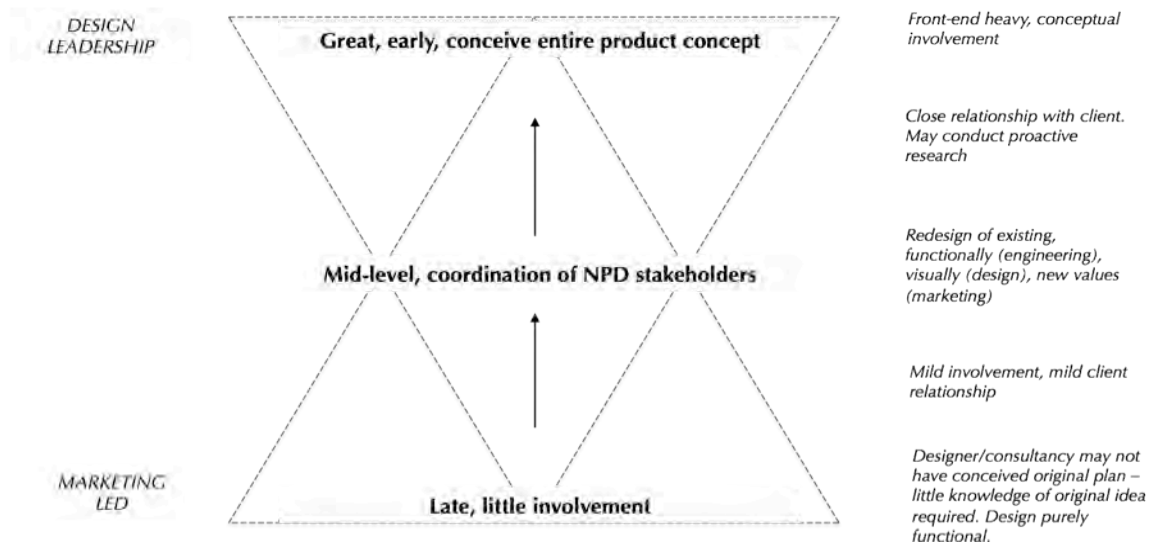
Source: based Findings 3 and 6 from Chapters 6 and 7 (as well as on Evidence Tables 3, 6, 9 and 12)

8.5   Conclusion: shaping understanding of design leadership

From this final analysis, a pattern of broadening of design as a profession and business is manifest. First, designers are assuming a broadened role and responsibility for tasks across NPD. An increasing complexity in NPD, and the broadening of the designer's remit, allows designers to take greater responsibility. The designer becomes a crucial coordinator of the project, liaising between a variety of inputs. Second, there is a greater client reliance on the designer to take greater NPD responsibility. Designers assume a leadership role as this reliance increases, and designer influence extends across the NPD process. Third, as consultancies become more business-savvy and broaden their service offering, they are taking a greater leadership across their clients' NPD processes. This drives a general move from marketing-led NPD to design leadership. Fourth, research synthesised by the designer becomes grounds for new

products. The designer engages in a mix of hard and soft methods to sense the market, and in doing so, takes command of another area traditionally the realm of the marketer.
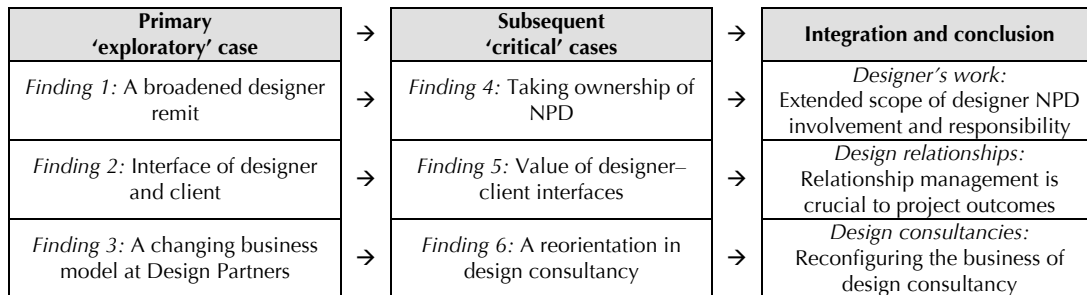
In effect, the designer as NPD leader moves forward and propels the client in new directions, as well as taking charge of the coordination of the NPD effort. As consultancies start to offer a greater range of services, designers are becoming multi-skilled in order to cope with this complex range of issues. It is evident that designers are taking on greater importance as the client increasingly relies on design to answer problems of greater breadth and complexity. Table 8.4 summarises the characteristics of designers taking NPD leadership, in terms of their NPD involvement, the relationship with the client, the required skill-set and role, and types of research undertaken.

Table 8.4: Characteristics of design leadership in NPD

Area	Characteristics
NPD involvement	Extremely complex input – shaper of process and final product output. Involvement across NPD process.
Client interface	Entrusted by client to deliver as a consultant. Designer is proactive in guiding the client on strategic issues, and a degree of autonomy is granted. Designer valued by client.
Skills and role	Designer involved in product conception. Input is analytical, and often beyond traditional functional design. Designer guides client strategy. Acts as a hub, coordinating input of multidisciplinary stakeholders.
Research	Sophisticated and developed understanding outside of functional design expertise. Intuitive modes of market sensing, in fields such as customer, market, industry, technology.

Source: based on the findings presented in Chapters 6 and 7 (as well as upon interpretation of the data gathered in all Evidence Tables)

Designers increasingly sell a wider range of expertise and provide greater value to clients. Design leadership denotes the designer's expanded skill-set, his/her responsibility across NPD, and his/her strategic guidance of the client. The designer blends a unique and far-reaching set of tools, approaches and insights. From these integrated findings, a set of conclusions are drawn in the following chapter, as well as discussion of a range of implications and managerial issues.

Primary 'exploratory' case	→	Subsequent 'critical' cases	→	Integration and conclusion
Finding 1: A broadened designer remit	→	*Finding 4:* Taking ownership of NPD	→	*Designer's work:* Extended scope of designer NPD involvement and responsibility
Finding 2: Interface of designer and client	→	*Finding 5:* Value of designer–client interfaces	→	*Design relationships:* Relationship management is crucial to project outcomes
Finding 3: A changing business model at Design Partners	→	*Finding 6:* A reorientation in design consultancy	→	*Design consultancies:* Reconfiguring the business of design consultancy

9.1 Introduction

This chapter draws together the conclusions of the thesis, suggesting that designers and design consultancies are taking increased leadership, ownership and responsibility in the client's NPD process. It begins by setting out how the three central conclusions of the study make contribution to theory and practice. The findings and frameworks synthesising designer NPD leadership are celebrated as being of value to practitioners, both design- and client-side, involved in new product development. Managerial and policy implications of a new designer role are set out, including those for the future of design education. Finally, avenues for further study are proffered.

9.2 Research conclusions and their theoretical contribution

Consultancy design firms and their designers are found to be in a period of transition, as they cope with a great deal of change in the terrain of design consultancy. A series of confluent external factors – for instance, a more challenging economy, increasing complexity of products and manufacturing technologies, globalisation, and a demanding and powerful consumer – have propelled design to a position of visibility

and prominence within industry. Designers are being asked to solve problems of greater weight and complexity than in previous generations. Indeed, such views are beginning to be theorised among design scholars (e.g. Cope and Kalantzis, 2011).

In an era where design, its uses, its tools and its organisation are taking on an increasing importance, evidence from the literature suggests designers are embracing a role of greater leadership in new product development (e.g. Perks et al., 2005; Valtonen, 2005; Verganti, 2008). The empirical research of this thesis finds that design consultancies are becoming involved in NPD to a greater extent. Overall, there is a move from following marketing's lead to a greater design NPD leadership.

Developing the integrated findings in Chapter 8, which in turn were the interpretation of the 12 Evidence Tables (as listed in Table 5.4), Table 9.1 summarises the analysis and findings of Chapters Six, Seven and Eight into three conclusions. These conclusions – (1) an expanded scope of designer NPD involvement and responsibility, (2) importance of managing the designer–client relationship, and (3) a reorientation in consultancy from passive and late NPD involvement to one of earlier and fuller leadership – are discussed, and their theoretical contribution highlighted.

Conclusion	Description	Key ideas
1. *Expanded scope of designer NPD involvement and responsibility*	Designer's remit broadens to encompass a range of other activities across the NPD process. Designer is thereby involved more extensively, and takes greater ownership of NPD.	• An increase in project complexity means designers are involved from the outset of NPD. • Designers are concerned with fabrication of marketing 'story' – products are then tailored around these ideas. • Extensive designer front-end NPD involvement means designer takes overview of client strategy and brand direction rather than just individual products. • Equally, designers are involved at a strategic level in developing and launching products on the market. • Designers split time between strategic and managerial NPD coordination, and conventional functional design tasks.
2. *Management of designer–client relationship is crucial to design project outcomes*	Designer–client relationship determines how designer is involved in NPD. Greater client reliance on design pushes designer in to leadership position.	• Relationships paramount in project development. • Trust enables greater personal designer responsibility to client and project. • Significant proportion of designer time is devoted to building positive relationships. • Relationship proximity acts as an aid to enlarging the dimensions of designer's remit. • Close relationships can bring an asymmetry – boundaries between client and designer blur, and symbiosis can develop. • Designer/marketer disconnect manifest in practice and can cause tension.
3. *Reorientation in the nature of design consultancy – a move to design leadership*	Design consultancies taking a greater ownership of clients' whole NPD process. Breadth of offering extending to strategic and managerial services across NPD.	• Shift in focus in client requests from tangible, product-related responsibility to intangible business-related insights. • Greater project complexity as consultancies involved in business strategising as well as design. Offering extends to full range of services from beginning to end of NPD. • Consultancies balance functional and conceptual input. • Inside the consultancy, teams broadening to encompass associated disciplines. Soft skills becoming more important than hard. • An overall move from following the client to taking the lead.

Source: Constructed from the integration of findings in Chapter 8

9.2.1 Conclusion 1: Expanded scope of designer NPD involvement and responsibility

In Chapters One and Two of this thesis, it is argued that, at present, design is in a new era of ascendency in its importance in business. The present research posits that the tools and approaches of design are well suited to today's competitive environment. As in the findings of Perks et al. (2005), who suggest an evolving and sophisticated skills- and actions-based leadership in the remit of designers, a developing leadership role for the designer in NPD is unravelled in this research. This enlarged role is one of dexterity, where the consultant designer's remit broadens to fulfil a variety of roles, and designer offers increased value to the client firm. In tracking these often overlapping and multivariate roles, the designer emerges as crucial to, and central in, the NPD effort, and well positioned to coordinate the NPD network.

This empirical study finds the role, remit and responsibilities of the designer to be extending far beyond the conventional ideas of designing and making. Rather, the designer takes a bird's eye view of the client business, and constructs product visions in-fitting with a set of strategic business objectives. Thereby, the designer's knowledge broadens to take responsibility for a combination of the intangible and the tangible, the client's strategy and the product itself. Designers at all four consultancies have assumed a range of responsibilities in domains beyond designing. Designers: (1) were 'designer–marketers', (2) acted as strategy consultants, (3) shaped product directions, (4) were all-rounders in NPD, and (5) coordinated the overall NPD effort.

The designer–marketer

Designers are *au fait* with the language and craft of the marketer. Designers have become increasingly sophisticated in their knowledge of sales and selling, and engage on an in-depth level in tasks traditionally associated with marketing; for example, market research, segmentation, and the creation of marketing visions. This involves reorienting existing design-based skills into a wider sphere. In effect, the designer's remit is gravitating to quasi-marketing.

Designers seek to understand the rationale and essence behind the product, as well as its tangible form. Market opportunities are identified, and product concepts tailored in response. Designers are 'sponges' absorbing general insight – of, for example, people, markets, and society – which bring about deep understanding of broader trends. This in turn assists in the creation of relevant ideas and concepts at the NPD front-end. In line with Verganti's (2008) theory of design-driven innovation, concepts are shaped around their commercial contextual scenarios by designers' understanding of the market, and opportunities from this genre of intuitive insight are synthesised. This enables the creation of an associated marketing 'story'. That these stories often arise from the designer rather than from the marketer is significant.

While the addition of sales, selling and marketing expand the designer's remit, these tasks are not entirely new. Rather, they are extensions to a role that already has an awareness of selling and the market. Like marketers, designers aim to satisfy consumer needs and desires. Like marketers, designers' approaches involve analysis of people. The present study celebrates a sense of similarity in the roles of designers and marketers, and develops and contributes to the theory of convergence presented in Borja de Mozota (2003) and Kristensen and Grønhaug (2007).

The unison of marketing and design is a continual feature of this research, and corroborates the studies described in Chapters Two and Three, which suggest the two are mutually beneficial and require better integration (Bruce and Bessant, 2002; Bruce and Daly, 2007; R. Cooper, 1994; Luchs and Swan, 2010; Moll et al., 2007; Ulrich and Eppinger, 2008). The idea that design and marketing in NPD are inextricably linked emphasises the need for integration, while also highlighting a pervading overall transition in the design profession.

Acting in a strategic consultant capacity

The research finds that the remit of the consultancy designer has altered and broadened in tandem with its increased gravitas and credibility as a central player – a leader – in NPD. Leadership involves taking charge of project and client, and designers offered this genre of consulting from a strategic standpoint. Perks et al. (2005) found a group of designers acting as process leaders who undertook actions to question marketing's

strategy. In this research, designers took it upon themselves to act as consultants on multidimensional issues. Rather than solely advising on form and the functional tasks associated with the development of products, designers take account of the clients' business and brand strategy, and this impacts all design decisions.

As consultants in business issues as well as design issues, designers are acutely aware of the implications that design decisions have for client brand, identity and direction. They use these ideas to take control of the project and lead the client; for example, by being selective about what is shown in concept presentations. By narrowing the selection set, designers guide clients as to their product strategy, but also influence the overall business and brand strategy.

Shaper of product direction

Designers are vocal early in the development process. They are keen to be involved in understanding and shaping the client's brand strategy. Ideas are generated in the studio with this bigger picture in mind, and only those in-fitting with the desired brand image are presented to the client. Designers have developed their skill sets to become business-savvy, and understand their role to be much deeper, more complex and more multidimensional than the providing of surface detail for predefined products. Briefing is another such area in which the designer takes responsibility from the outset to influence direction and lead the client. By interpreting loose or non-existent briefs, designers shape products in line with their vision of the client's strategy.

In reshaping product strategy, the designer takes greater responsibility and ownership for NPD outcomes, and has extensive and decisive involvement in shaping and determining what gets made now and in the future. The study develops Verganti's (2008) proposition that design at its most sophisticated NPD involvement acts in a series of ways to eventually strengthen brand value. No longer is the provision of a handsome skin on a preconceived marketing brief enough. Rather, in the design leadership approach, designer synthesises knowledge and experience from, among others, business strategy, research methods and usability to formulate and direct the problem and its conceptual foundations. The designer is core to the development process, and has input from the outset of NPD.

All-rounders in NPD

As designers grapple with business and economic issues, as well as other concerns more traditionally associated with design, the remit and design process become distinctly nonlinear. Indeed, as NPD project complexity intensifies, so does the remit of consultant designers. Moreover, involvement starts early and finishes late in the NPD process. While minor functional tweaks in generational NPD pose simplistic tasks in response to client requests, designers are exercising more authority and taking the initiative to plan and suggest new opportunities for clients. The pervading sense with which designers speak about their work is greatly distanced from the purely functional activities of design development. Rather, the role of the design consultant marries strategic and analytical managerial activities on one hand with the functional, practical development tasks on the other.

As suggested by Bruce and Harun (2001) and Bruce and Bessant (2002), design is becoming an activity associated with a realm of activities interrelated with designing. In terms of job composition, there is a significant split between managerial work and traditional design activities. A greater portion of designers' working time is consumed with managerial, organisational and strategic planning tasks. To that end, designers are increasingly reluctant to base their product ideas only on sketches. While time is split between the organisational and practical components of the job, the general trend is that the greater the experience of the designer, the less time he/she spends designing. Paradoxically, creative leaders spend less time on conventional creative work than more junior colleagues, and more on organisational and management-related tasks.

Coordinator of overall NPD effort

The role that the designer fulfils in NPD is increasingly holistic, and involvement at consultancies is starting earlier and finishing later. By engaging in research, by conceiving the marketing rationale, by guiding the client through selection, and by being involved as the 'glue' to realise the project as intended, designers are key in the

NPD process. By being involved from the very earliest, conceptual stages of product development, design is enabled to manoeuvre into an altogether more powerful position than when participation is solely NPD back-end. To be involved in creating concepts, designers need to have in-depth knowledge of the client brand. In some cases, having co-created the brand, the designer claims to know the brand as well as the client.

It is through having this knowledge, skill and an all-round capability that designers are able to offer a greater degree of leadership to clients. Designers are integral from beginning to end of NPD. They are lynchpins in liaising with stakeholders throughout the NPD process, they have integral involvement in creating the product's conceptual premise, and they ensure quality manufacture, and adequate and timely production. The result of this is a strategic, business-oriented offering. Designers are becoming consultants on product strategy, rather than simply being service providers associated with superficial design creation. As suggested by Verganti (2008), management of these interactions is crucial, and this research suggests design has capability in filling this role.

This area of contribution helps to refine and build understanding of design leadership. Design as a bridge between producer and consumer, between internal facing and customer facing operations has been examined (e.g. Borja de Mozota, 1998; Kristensen, 1998; Walsh, 1996). This research suggests the designer's role as an integrator of NPD across organisational silos. It is widely accepted that NPD is a multidisciplinary process, involving the input of many stakeholders (Hart et al., 1999). Designers, in their reframed role as managers, strategists and organisers, are gradually becoming a hub in NPD, taking a central, coordinating role, and acting to gather and synthesise all relevant input into the NPD process. Designers are leaders of client and process, and lynchpins in a multidisciplinary team.

Closing comment: taking ownership across NPD

Dreyfuss's consultancy studio of the 1950s emphasised design integration unilaterally across the firm, and designers were encouraged to multi-skill and wear many hats at once throughout the project. It seems that, propelled by a number of confluent market

and societal changes, design is in a new period of ascendency. Having been growing in credibility and value over recent years, the designer is once more becoming influential, to the point of leading NPD projects.

As its contribution to company performance is charted and quantified in greater detail (e.g. Bruce et al., 1995; Gemser and Leenders, 2001; Hertenstein et al., 2005; Platt et al., 2001), and success stories of design inclusion has given rise to celebrated products (e.g. at Nokia, Apple and Braun), design gains in reputation and garners greater recognition from business leaders. Where designer leads client and process, where scope of the designer's remit enlarges to take advantage of his or her ability to soak up insight from a range of disciplines, in particular marketing, and where designers coordinate and integrate a wider NPD team, this research finds that designers are central in deciding and shaping – leading – what gets produced and consumed.

9.2.2 Conclusion 2: Relationship management is crucial to design project outcomes

Management of relationships has been crucial in marketing thought over the past two decades (e.g. Egan, 2008; Gronroos, 1994, 2004; Gummesson, 2008). However, the importance of relationships remains underdeveloped in design management literature. Early design management literature in the 1990s pointed to the importance of the designer–client relationship in determining what ultimately gets made, and how design can be involved in the development of new products. It remained undeveloped as a topic, but current design literature (e.g. Cooper, 2011; Russo et al. 2011) is revisiting its importance. This thesis develops the area, and makes a significant contribution to understanding the importance of the relationship with the client.

Building on research by Bruce and Docherty (1993), Bruce and Morris (1998a, 1998b) and von Stamm (1998), designer–client relationship relationships are found to act as important conduits of the NPD process. They are crucial to the progression of the NPD process, and determine to what extent and when design is included. The research also makes contribution to the influence of the relationship in NPD, in particular the extent to which products are realised according to consultancy or client visions. Four key strands are unbundled: (1) positive relations = smoother projects, (2) a threat in

relationship asymmetry, (3) designer sensitivity, and (4) an inseparability of personalities and business.

Positive relationships = smoother projects

Designers link positive, enduring relationships to smoother NPD progression. In these cases, designers are recruited early and extensively into the NPD process. Working with the same clients over several projects, even several years, means designers become knowledgeable about the client brand and company strategy. Developing the ideas of Bruce and Docherty (1993), designers in some cases assist in directing brand and strategy, and consider this to arise as a direct result of an enduring partnership.

In the most intense partnerships, relationships are so proximate that formal briefs become redundant. Designers become involved from the earliest stages of NPD by conceiving concepts and developing brands according to intuition, rather than written client requests. Having built relationships, even friendships, with individuals on the client side, designers know, and are able to predict, clients' reactions. In these scenarios, designers reported a greater freedom and flexibility in their work, and this corroborates research by Lauche (2005) on the designer's work motivations. Lauche posited that when designers have greater control of the design, they are empowered to take greater ownership of it. This once again brings the opportunity for the designer to exercise autonomy; for example, by educating the client on their design vision. In these cases motivation is extremely high, as the client's trust in the designer's knowledge of company and brand empowers the designer to tailor appropriate solutions.

Personnel changes mean that relationships are dynamic, and therefore the designer's place with the client organisations is constantly in need of careful management and negotiation. Jevnaker's (2005) idea of designing 'in the mess' of real-life organisations, where human actions are unpredictable and complex, emphasises the fragility of the client–designer relationship. This study develops these ideas to suggest that designers are adept at fostering intense relationships to strategically enable a greater control over projects.

A threat of relationship asymmetry

Designers nurture positive but intense relationships. The literature suggests that long-term, trusting relationships between client and design consultancies with a shared vision are the optimum situation for the conception of superior design solutions, and this affects both the timing and extent of designers' NPD involvement (e.g. Bruce and Docherty, 1993; Jevnaker, 1998). This research finds that intense, proximate relationships holds both benefits and pitfalls, as empowered designers challenge the status quo.

While the personal chemistry and conviviality between designers and clients in some situations allows smoother projects, and more extensive involvement, close relationships also have the tendency to blur the boundaries between client and design teams. For instance, reliance on few, key clients leads to an ambiguity in status. While consultancies are external to client firms, intensity means that they can be treated as if an internal resource. For example, clients can be needy and dependent on the collaboration, and consultant designers acquiesce to unreasonable client demands in a desire to please. This brings a decrease in boundary definition, and consequently in respect. For instance, passion for the work means that designers are always 'on call'. These situations generate extra work, and are not considered to lead to the best design solutions.

Intense relationships also have benefits. The depth with which designers engage in the client's NPD effort means greater involvement in, and control of, the project. For example, the designer's involvement in visual and strategic brand creation was significant as it allowed the designer to form strong opinions. At one case study site, this even resulted in the consultancy's involvement in directing the client's wider network. The designer was again a hub for client's NPD and strategy.

The transition from service providing to consulting is often uneasy. In selling concept validity to clients, the constellation of the client–designer relationship is crucial. While Bruce and Docherty (1993) and von Stamm's (1998) studies found that long-term relationships gave rise to better design through mutual trust, the present research

develops this idea to expose an asymmetry where the client–designer relationship becomes overbearing and ambiguous, and often results in tension. On a personal level, designer frustration and disenchantment arose from the compromise of ideals when a tug-of-war scenario unfolded with the client. For the consultancy, the asymmetry in relationship also caused tension; for example, the undertaking of extra work for the same fees. These clashes are the result of ambiguity in the relationship.

The models presented in Chapter Eight provide frameworks for guiding the design process to prevent such conflict. In Figure 8.1, a range of the designer's NPD input is delineated, Figure 8.2 describes a taxonomy of the role and responsibilities undertaken by designer and client, and Figure 8.3 illustrates types of designer NPD involvement. Together, these models attempt to put a structure around the complicated interfaces involved in managing the NPD project. It is suggested that they can be used in practice to define clearly, especially from the point of view of the consultancy, boundaries around their role, especially when specifying budgets and schedules. Finally, the models act as a measure to guard against any conflict between client and design consultancy.

Designer sensitivity

In line with the literature on designers' part in the process of creation (cf. Table 2.5), designers are personally involved in, and care intensely about, the projects on which they work. Designers have an innate desire to create products that help people, and to that end, labour intensively to find the optimal solution. Disappointment is common when products return from manufacture having been changed to the detriment of the original spec. Moreover, the adjustment in remit towards marketing and selling is often met with designer resistance, and disenchantment with the profession as a whole.

These findings build on the research on designer methodologies and the design process discussed in Chapter Two. The studies of Cross and Cross (1996), Candy and Edmonds (1996) and Lloyd and Snelders (2003) suggest an unpredictability and uncertainty in the design process of 'exceptional', renowned, designers. Jevnaker (2005), Lauche (2005) and Michlewski (2008) look at designer actions within organisations. These studies point to a conflict in goals, motivations and values upheld by individuals from different

backgrounds. While the findings of the present study suggest convergence in the roles and desired outcomes of designers and marketers as design moves into a position of greater NPD prominence, a tension and frustration is also uncovered, particularly developing Lauche's (2005) argument. Lauche suggests that for better design output, the individual designer's place within the organisation needs to be supported and integrated. Likewise, the present study finds that the sensitivities of the designer, and his/her passion and care for the work, can hinder how successfully the designer can wield leadership and uphold his/her place with the client organisation. In the era of reorientation of design consultancy, this is an area of concern, and is returned to in the recommendations section of this chapter.

Inseparability of people and business

Designer–client rapport is a direct influencer in shaping the dimensions of the designer's role. Personalities are assigned to projects according to those on the client-side team – it is essential to ensure as strong a 'match' as possible. In situations where trust is high, the probability is that people like each other. Business meetings and visits are used to build and develop interpersonal relationships. In these proximate situations, designers take it upon themselves to deliver the best possible solution for both client and user. Again, the idea of sales and selling is evident. Being aware of the client's position within the company helps the designer to use that information tactically in order to better sell their ideas upstream in that company. Moreover, personal bonds are influential in business development: after changing employers, it is not uncommon for client-side marketers to re-contact the same designers on behalf of their new employer. Fragility and dynamism are once more features.

Donald Schön's (1963) *Harvard Business Review* article charting corporate resistance to adopting new ideas concludes that it is largely social interaction, rather than formal procedures, that brings about new products. The personalities involved are an important asset. Likewise, this research concurs to conclude that relationships are a key mediator of, firstly, how successfully ideas conceived by designers are brought to fruition and launch, and secondly, how smoothly the development process unfolds.

Closing comment: value in managing positive relationships

Relationships are key to design being fully consulted and integrated into NPD in all the consultancies studied. The choice of design consultancy is an extremely important decision for the client. In general, the better the relationship, the smoother the project will be, and this was crucial at all case study sites. Significantly, the external design consultancy can extend its influence to be a key coordinator, strategist and architect of the product development process when relations are positive. This has repercussions for future and evolving responsibilities of design.

Building on the idea that relationships are an important conduit of NPD, the research also makes contribution to design leadership by consultancy designers. Junginger (2009) asks whether external design is always less influential, and this research answers in its conclusion that consultancy design can wield a significant level of control over a client's product, brand and even its corporate strategy development when the relationship permits such involvement. Verganti (2008), in his discussion of design-driven innovation, posits that external design suppliers can aid and speed the pathway to radical product innovation, and that management of interfaces is an important aspect to the role of the designer NPD leader. The findings suggest that, in mature product categories, designers have a unique perspective that straddles the divide between in-house and external. This renders a situation where the consultancy is able to suggest product ideas, as well as to contribute in a strategic way outside of the traditional area of contract (i.e. consulting on brand and product strategy). This is especially true in projects where relationships with clients had been nurtured over the course of several same-client projects.

9.2.3   Conclusion 3: Reorientation in design consultancy

Research by Perks et al. (2005), Valtonen (2005) and Verganti (2008) suggest a central and decisive involvement of the designer in NPD. This research sought to discern, contextualise and chart this shift in the territory of practice. The study finds a reorientation in the nature of design consultancy. Design consultancies that were once led by their clients are taking greater control of NPD. Within this idea, a number of pertinent issues arise in the empirical study: (1) an increasing complexity in designing,

(2) a novel strategic model of design consultancy, (3) expansion in expertise, and changing designer competencies.

Increasing complexity of designing

In the ultra-competitive environment of the 21st century, products are becoming more complex. Technology is sophisticated, and methods of production and manufacture are rapidly evolving. Speed to market is of the essence, and technologies are enablers to this. Markets are global, aided by communication technologies. Consumers are presented with a seemingly unending range of choice. There is a greater demand that products cater for their specific needs (Anderson, 2006). Moreover, the competitive environment requires the imbuing of even greater dimensions of value into products.

The findings of the research suggest a flexibility, adaptability and capability on the part of design to rise to meeting the increased demands of the 21st-century market. As the designer becomes an adviser in shaping the client's overall strategy, as he/she is involved in areas above and beyond the giving of form to a preconceived product, and as his/her responsibilities extend to being leader and coordinator of a multidisciplinary NPD effort, the complexity of design has increased to take account of a range of issues other than 'just' designing. The idea of furnishing the client with 'just' a design spec is outmoded. Rather, the service offerings of the consultancy studios are expanding to cope with broadened client requirements and a greater scope of brief complexity.

Martin's (2009) theory of design thinking suggests an organisation-wide applicability for the tools, methods and approaches of design. In this view, design thinking is the amalgamation of design and business tools to cope with a range of business issues far removed from the traditional design-based competencies. The present research corroborates this idea. However, it furthermore suggests that the designer is capable of administering advice on complex business and organisational issues, outside of the traditional design domain. The essence of design leadership is the union of the analytical and practical, the strategic and functional, the intangible and tangible in the activity of designing.

Towards a strategic model of design consultancy

In the practice of design leadership as presented, described and developed in this thesis, design consultancies are offering a far broader range of services to clients. These range from areas traditionally associated with design (for instance, engineering, manufacture and prototyping) to others more distant from conventional design skilling (such as human factors research, business development and marketing), and are reinforced in order to cope with increased problem complexity. Consultancies offering pure industrial design are becoming outmoded: the trend is to combine expertise in industrial design, communication design and strategy under an umbrella studio brand – a 'super' consultancy.

The mottos of the case study consultancies are reflective of a range of design leadership situations. While all offer a range of services, some lead at the conceptual end of design innovation while others form a balance between the strategic and functional across NPD. While attempting to offer a full NPD service offering, client logistics in time and budgets assigned to NPD are determining that these consultancies are in demand for the front-end, conceptual stages of NPD, and less desired at the back-end of practical, physical development. This is normally given over to specialist functional service providers in that area, often housed geographically near to manufacturing facilities. The research suggests a range of types of design consultancy leadership situations, as suggested in Figure 7.8. At one side, front-end conceptual design consultancies, such as frog design, conceive product rationale and ideas. Others offer a balance of strategic–functional activities across the NPD process, such as Smart Design and Designworks USA. Design Partners is in the process of navigating this shift to take a greater leadership of its clients' NPD. Other functional design service providers work to a pre-defined specification, but are not considered to lead the client.

The findings suggest that the designer is taking an ever more extensive involvement from the earliest stages of the product development process, manifested in the greater scope of remit and expansion of responsibility. The role of the designer is found to be increasingly taking on a strategic dimension, and provides leadership through shaping and defining product direction. Again, this marks division from design acting in a marketing-driven, functional capacity to design in a leadership/strategic capacity.

Expanding expertise, and re-evaluating designer core competencies

As the range of services offered to clients diversifies, consultancies are becoming equipped with broadened knowledge and expertise. The case study consultancies are recruiting employees based on passion, personality and communicative attributes, rather than just emphasis on traditional 'hard' skills. While hard skills are still desired, a 'learning by doing' policy offers flexibility. As such, designers can originate from a broad range of backgrounds (for example, anthropology, fine arts, and business). Notions and traditional definitions of 'designer' are becoming outdated. The findings of the present research reinforce Bruce and Harun's (2001) and Perks et al.'s (2005) propositions that non-design tasks are paramount in situations where designer is leader. Indeed, the expansion of the designer's traditional remit to encompass the communication, organisation and managerial aspects of NPD drives a greater designer NPD ownership.

Victor Margolin's remark that the idea of the traditional designer is 'mouldy fig' at the Design Research Society conference 2010 is telling, and seemingly encapsulates the transitional notion of design emerging from current research, with which the present study unequivocally concurs. Likewise, Simon (1996) wrote that 'everyone designs who devises courses of action aimed at changing existing situations into preferred ones' (Simon, 1996:112). Both Margolin and Simon's views underpin the design thinking approach where design skills are transferable across non-design functions (Margolin remarked that all employees at highly innovative organisations involved in frame-breaking NPD such as Google – whether engineers, biologists, technologists, researchers – are considered to be 'designers'). However, this study also suggests that the designer is capable of subsuming a range of skills outside of traditional design tasks.

This research has uncovered breadth and diversity in the design consultancy profession, and finds it in transition. The value of the designer is found in his/her thought processes and approach, as well as the traditional hard skills (as one consultancy founder revealed, hard skills are 'just a medium for getting where you want to be'). The research finds a sense of inclusivity in design. The plethora of interrelated roles that now fall under a 'design' band, like managing and marketing, are now of similar or equal value. In 2003, the Danish Design Centre's 'ladder of design

maturity' speculatively proposed that design was becoming a more holistic organisational approach. This thesis corroborates this proposition in its suggestion that the designer's input extends throughout NPD, and indeed across a range of tasks outside of conventional designing.

Closing comment: a new global business model of design consulting

It is suggested that design consultancy is reframing its expertise outside of the traditional, back-end NPD involvement, towards a more holistic offering where design is an *approach*. This classification is consistent with Perks et al.'s (2005) 'leadership' grouping, which was suggested to be the most sophisticated form of designer NPD involvement. This new breed of consultancy toils across NPD, suggesting new business opportunities and developing these ideas.

While Perks et al. suggest that this type of consultancy is a player in a multidisciplinary design effort, these findings also suggest a greater ownership and involvement in a multinational context. All four case study consultancies had studios on two continents (or more); at least two of the research sites can be considered to be 'super' consultancies with studios in the US, Europe and Asia (i.e. frog design and Designworks USA). This international 'branching out' is reflective of a profession that is transitioning from niche involvement in design to design conglomerates. Presumably, having local studios also allows customised design decisions by culture, which is suggested to improve success in local markets (Bruce et al., 2007). It is suggested that this has enabled growth, and attracted global clients to these consultancies.

The world's largest design organisations often have studios spanning several continents and offer the client a range of design-related services. It is no longer good business sense to focus solely on industrial design. To stay profitable, these firms offer a range of integrated design services to compete against 'free' design – that is, design being offered as an added extra by manufacturing plants based in the East. These intercontinental design groups now lead the way in the industrial consultancy industry, simultaneously specialising in branding, communications, marketing, strategy, engineering and research, among other services. In short, they endeavour to offer full-service NPD.

9.3 Design leadership: best of both worlds

This research has exposed a tension in the designer's remit and the consultancy's offering – designing versus marketing; synthesis versus analysis; doing versus thinking; leading versus following – and indicates the transitionary nature of design consultancy. While such dilemma or paradox is often interpreted as imposing a simple 'either–or' choice between polar opposites, a more inclusive notion posits that, in a 'both-and' approach, one is able to acknowledge and better cope with the ambiguous, complex and diverse nature of business and organisations (O'Driscoll, 2008).

Derrida's (1997) idea of the 'logic of supplementarity' holds that two linked opposites help to explain and make sense of one another. For design, with its multitude of facets and new challenges, this is a valuable proposition. The diverse and increasingly complex nature of designing, of design consultancy, and of NPD renders a more inclusive, pluralistic and integrated vision necessary to be able to cope with, understand and profit from the advantages of both sides of the organisation's coin. 'Both–and' approach becomes more favourable than 'either–or' or indeed 'neither–nor'. The concept of the 'ice breaker consultancy' – with conceptual focus at the prow, and service provision in the engine room – fortifies the suggestion that design and business are not mutually exclusive – there is no imposition of a choice. Rather, design leadership captures the idea of harmony, unity and fusion of the design-led and marketing-led approaches to NPD.

Figure 9.1, first introduced in section 3.5 as Figure 3.4, maps four different approaches to NPD. As suggested by Martin (2009), there is something of a paradox between marketing-led and design-led NPD. In the marketing-led approach, the marketers 'push' products to the market by means of mass communications and manufacture. Marketers seek 100% reliability in arriving at a 'one size fits all' product. By contrast, in the design-led approach, the designer's view is paramount as he/she seeks 100% design validity. Products are functional and visually appealing, but are often created without due consideration of business and the market, and characterised by broadened NPD involvement. The nature of paradox, where two seemingly contradictory,

exclusive factors appear to be true at the same time (de Wit and Meyer, 2010b), presents a dilemma in finding a resolution. Strategy paradoxes, such as the design-led/marketing-led dilemma, can be resolved where attempt is made to accommodate the two poles at the one time, with the intention of reaping the 'best of both worlds'. In design leadership the designers themselves take these apparently conflicting approaches. It can hence be termed 'design/designer leadership', as illustrated in the upper right quadrant.

Figure 9.1: Mapping design leadership
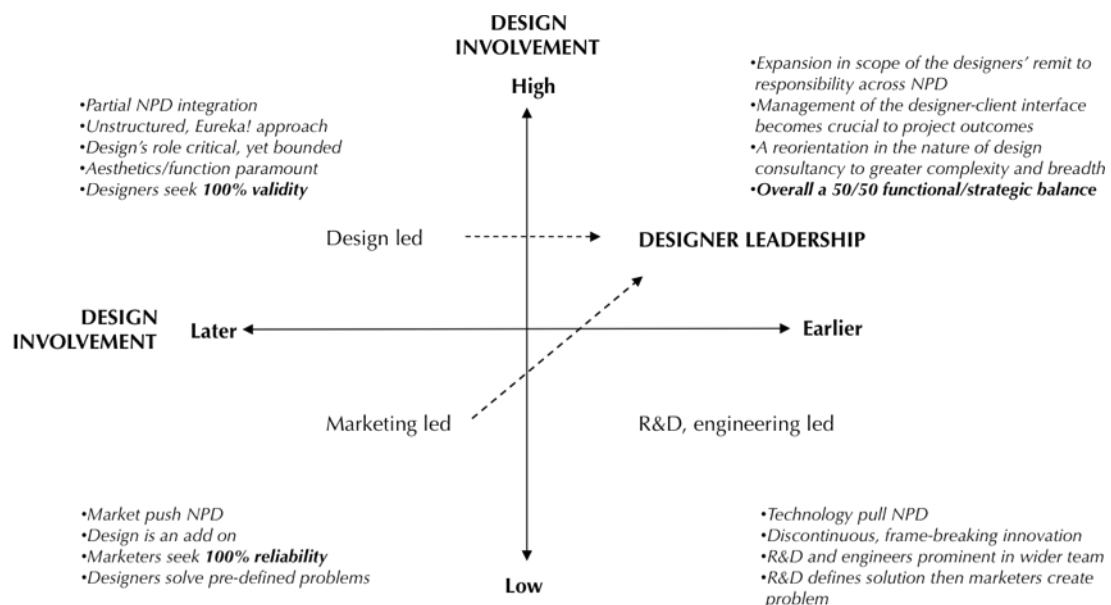
Source: built from literature and integrated themes in Table 9.1

This research, building from the integrated findings Table 9.1, finds a momentum of designers taking greater prominence, decision-making and guidance – leadership – in the new product development process. Designers', and design consultancies', embracing of the language and craft of business and marketing has enabled reorientation towards a more powerful and increasingly knowledgeable position in

NPD. Design thinking (Brown 2008, 2009; Martin, 2009), has its focus on the relevance and contribution of design to business managers, decision-making, and the management of the organisation. Developing this proposition, designer leadership captures this unifying notion from the perspective of the designers themselves, and from the practicalities of design consultancy. In taking responsibility for their clients' brands, strategies, NPD processes – in essence, for the clients themselves – designers have assumed a degree of ownership beyond the traditional sphere of design influence. Design leadership captures the richness of the evolving, inclusive and strategic role of designers in the context of NPD.

9.4   Implications of the research for practice, policy and education

The findings of the present research have considerable implications for a wide range of parties: for practitioners of design, that is the designers themselves; for consultancy managers; for the marketing managers challenged with assembling NPD with a coterie of stakeholders; and also for grass-roots design education.

The first of these concerns empowerment. It has been posited that the design function is moving into a powerful position as NPD hub. However, the resistance on the part of managers to embrace designers and accept the benefits and capabilities offered by design has to be surmounted if design can be used to its potential. Designers must therefore be empowered as leaders, and enabled to take ownership of their involvement in NPD. This will require the repositioning of design within corporate frameworks, as well as within structures of NPD. The models developed in Chapter Eight are a substantive tool to augmenting the designer's empowerment. As suggested previously, these models act as a guide to structuring design's participation in the NPD process. In particular, they can be adopted as a framework around which to facilitate transparency and clarity in the interface with the client, and establishing boundaries and preventing consultancy–client conflict.

Second, the research has developed knowledge surrounding the importance of relationships in NPD project progression, and in business development. Client–designer interface has been found to be the key interface in NPD. In general, the better

the relationship, the smoother the project will be. However, it has also been shown that, if relationships are not well managed, they can be detrimental to the consultancy, as well as the specific design project progress. It follows that relationship management is a key area that requires focus within the consultancy. It is contended that designers at all levels are trained in communication, and in the fostering of positive but mutually beneficial relationships with clients. This could take the form of awareness of the potency of the designer–client interface during education, and a consistent reinforcement in the workplace.

Third, for design education, an overhaul of curricula is suggested. Buchanan (2001) remarks that 'foundation year' at Carnegie Mellon University has been replaced by a common first year where students engage in a wider exploration outside of the physical components of design, to discover human experience in the social and cultural contexts in which people use products. The findings of the present study suggest a further expansion to studies in the contextual situations shaping the design process. Indeed, this recommendation corroborates recent research by the Design Council (2010b) that emphasises the need for design students to experience multidisciplinary teamwork. If designers are taking greater leadership, if the remit is moving to quasi-marketing, if relationships are indeed key to successful progression through practical design projects, these skills need to be learned and nurtured from an early stage. Ad hoc 'learning on the job' is no longer adequate where designers are strategic consultants. Rather than the existing focus in practice-based courses on the hard and conceptual skills of traditional design, expansion into the soft skills that are becoming more important and sought after within commercial practice is desirable. Topalian (2002) suggests that design management courses are divided by content and audience. In development of this idea, the findings of this research make the case for the introduction of core modules on management, marketing and organisation on practice-based courses. However, it is cautioned that these be seamlessly integrated into design education without neglect of the creativity that so marks and characterises the design profession.

Fourth, it is concluded that external, 'discrete' design – the classic design consultant – can have a significant impact on the overall client strategy. From this, there are implications for marketing managers assembling an NPD team. It has been shown that integration and communication are crucial for the smooth running and success of

projects. Listening to the views from the external teams whose impartiality may yield untapped potential for the client organisation is encouraged.

The fifth area also concerns communication and interfacing. The designer, in many regards, is a 'sponge', absorbing a rich patchwork of understanding of changes indirectly associated with project. He/she is an important conduit of ideas in the shaping of new products. However, as designers move into the hub position of NPD, it is proposed that this skill becomes even more significant. As designers are forced to interact with multiple stakeholders – manufacturers, suppliers, client business groups, users and customers, and even other consultancies – there is again a great necessity for the fostering of positive relations. The image of the omnipotent designer is outmoded, and designers are required to synthesise concepts that recall the needs of a range of stakeholders. Hence it is recommended that designers be required, to an even greater extent, to have the communicative ability to heed and integrate a diversity of inputs. The urgency for relationship and communicative training is increased.

Progressing from the previous ideas on communication, the sixth and final area of practitioner implication concerns the transition of the industrial design consulting profession overall. It has been suggested that the profession is moving in the general trend of an overall, strategic involvement in product strategy, rather than in the pragmatic area of product improvement. This change is substantive, as design consultancy is becoming more advisory-oriented, and less service-providing-oriented. There is hence a necessity for design managers to embrace this novel business model of design consultancy. As designers become more varied in background and education, as consultancies offer a range of pan-NPD expertise, it is paramount that an inclusive managerial approach to the new world of design consultancy be adopted.

9.5   Limitations and avenues for further study

Research conducted within industry, corporations and businesses can be met with resistance, and can be prone to difficulties in access due to privacy, secrecy and confidentiality. However, the 'access all areas' attitude found in the primary case study was unprecedented, and enabled acquisition of an extremely rich dataset. This was an

imperative part of the study as it allowed the laying of the foundations for the subsequent international case studies. While the four case studies provided a valuable data set, the limits to the generalisability of such case study findings must be recognised.

Time and financial logistics also circumscribed the area of concern/investigation in this research. Data was gathered from design studios, during interviews with design personnel, and in designer–client meetings. The focus hence lies on one side of the partnership dyad. While it was possible to enquire about and observe designers' interactions with their clients, besides attendance at meetings where both sides were present, all data is derived from the designer's opinion, point of view and perspective. The client perspective is worthy of investigation, and is a recommendation for further study. This might involve a similar type of methodology encompassing observation at meetings, and interviews with the business people on topics related to NPD organisation. Investigation of the inclusion of design from the business perspective would enhance and broaden understanding of its NPD involvement.

The research has yielded a model of designer involvement in the new product development process. By looking at consultancy designers and the projects with which they have engaged, it was possible to chart the extent of their involvement in mature project contexts. This data hence applies only to mature, continuous-style NPD, but it is also worth remembering this constitutes 90% of all 'new' products. It is suggested that a similar study conducted in radical frame-breaking NPD may yield worthwhile data, and build on the substantial body of evidence on radical design-driven NPD already conducted by Borja de Mozota, 2003; Brown, 2009; Calantone et al., 2006; da Silva Vieira et al., 2010; Hargadon, 2003; Hargadon and Sutton, 2000; Jevnaker, 2000; Kelley, 1999, 2001; Reinmoeller, 2002a, 2002b; Verganti, 2003, 2006, 2008; and Veryzer, 1998; 2002; 2005. Other design interfaces may also be worthy of investigation in the context of discontinuous, frame-breaking NPD; for example, design's interface with R&D or engineering.

Finally, consultancy design capability is at the core of the empirical study of this research. While it has been suggested to be more common than in-house design (Jevnaker and Bruce, 1998), indications are that in-house design teams are becoming greater in number (Design Council, 2010a) in correlation with design's ascent to

greater visibility and prevalence. Hence it is suggested that further study on the designer's role in in-house, continuous NPD may be worthy of investigation to uncover whether the findings – for example, the positive and negative consequences of proximate relationships – of this research are mirrored where designers are in-house.

9.6   Final thoughts on design leadership

Design leadership fortifies the notion of a new era of ascendancy in design. Where designers have the capability to improve the products we use in everyday life, to improve society and to tackle environmental issues head-on, the potential of this transition needs to be fully exploited and utilised. As the traditional tools of marketing become less and less able to have as profound an impact as those of design, design leadership emerges as the bridge between the marketing-led and the design-led.

The task now is to educate and enhance design's reach, and to assume greater credibility and recognition for designer leadership. Existing tensions need to be fully addressed, managed, and resolved. This research suggests an urgent and widespread need for designer and client (re)training to be able to embrace this new strategy. Finally, it is suggested that the models of designer involvement in NPD act as a valuable guide for designers and clients alike in navigating the increasingly complex realm of consultancy designer deployment.

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