

Historical Emergences of Design Thinking in Theory and Practice.

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Design thinking has emerged over the last twenty years as a new way of understanding the process and value of design, as it is applied in practice to assist the processes of other industries and organizations. By envisaging this through a Foucauldian lens, we are able to excavate the strategic 'gathering' of sources which act to validate and empower this set of practices as a coherent, historically situated, emergent discourse. This paper identifies the early emergences of the discursive elements of design thinking, and indicates the key validating theories and practices that support it.

INTRODUCTION

The past twenty years has seen a growing importance placed by Government and industry on design thinking. In 2004, New Zealand Trade & Enterprise initiated a 'Better by Design' team to deliver a programme to 'boost the competitive advantage of local businesses through world-class design'.¹ Better by Design promotes design thinking as a key design methodology through which this can be achieved². In 2017, DesignCo.³ published a report titled 'The value of design to New Zealand', which estimates the yearly economic contribution of design at approximately 10.1 billion dollars. This report places considerable emphasis on the importance of *design thinking*, noting that it is 'ubiquitous across all disciplines'⁴, pointing to the 'growing body of evidence that demonstrates the value of design thinking and processes as tools for driving innovation within the public sector'⁵.

*Design thinking*⁶ is, from a design perspective, something of a strange animal. It is primarily directed at non-design industries, proposing a specific set of practices that may be helpful to these industries, and based on underlying theories that suggest a unique way that designers operate. It has thus impacted design practice and education, such that we now find it in design curricula, in some regards shifting how design is seen and even what design *is*. On its emergence in social design, Tonkinwise⁷ has asked 'What is design that designers think reformed sociality is the outcome, if not also the means, of what designers do?' We might ask the same question regarding all of the industrial applications of *design thinking*. This paper explores these specific practices and theories through a Foucauldian lens in an attempt to excavate the mechanisms of their emergence and validation.

Interlocutors who feel passionately about the value of certain institutions, ways of operating, and the like, often heroize them, emphasizing their original, or 'special' nature. There is therefore the temptation to imagine their emergence as unique and historically dissociated from other occurrences. Yet, nothing emerges from a vacuum. Alternatively, we are often presented with historical depictions of key practices as a continuously unfolding evolution towards a present superior form. Foucault's notion of discourse is particularly useful in considering these kinds of emergences⁸. Discourse, in this sense, is where certain practices are brought together as a unity. Through this process, previously disparate components of the discourse are linked and officially sanctified through a professional language

with concurrent systems of accreditation which specify what may be practiced and who may practice it. Precisely what is chosen to be included and what remains excluded from the category, and thus what is and is not to be considered within the boundaries of the discourse can be seen in terms of the strategies of various social and institutional groups and stakeholders. Thus, rather than seeing *design thinking* as unique event, or natural evolution, this paper regards it more as a strategic *choosing* of useful elements by numerous stakeholders with different, but related perspectives. As such we might look at the history of the subject as a collection of noted historical emergences gathered to construct a decisive narrative; what Foucault terms 'a history of the present'⁹. We might compare the formation of *design thinking* to Foucault's explication of the formation, for example, of medical discourse; consisting of various speaking positions (doctor, nurse, patient, and the like), educational and industrial institutions (universities and hospitals), a legitimizing history, and a language specific to medical discourse. Each of these contribute to ways that power is enacted throughout the discourse, and dictate who, within the discourse, make speak to whom and about what.

A HISTORY OF THE PRESENT

We can regard design thinking within the overarching discourse of design generally, which emerged over the last two centuries, through various strategic relations to national economic interests. This can be seen as early as the 1835 Select Committee hearings, where British manufacturers and government attempted to combat the perception of French superiority in product design. The committee was set up to officially inquire into:

The best means of extending a knowledge of the Arts and the Principles of Design among the People (especially the Manufacturing Population) of the Country; also to inquire into the Constitution, Management and Effects of Institutions connected with the Arts.¹⁰

Immediately post-war, Britain staged two festivals to demonstrate the value of British design and innovation. Of the 'Britain Can Make It' festival in 1946, Atkinson¹¹ notes the intention centered around 'the value of "good" design and telling a story about how design could be ever improved'. The Festival of Britain in 1951 was wider in scope, but maintained the intention of demonstrating the value

THE TIMES FESTIVAL OF BRITAIN SUPPLEMENT



FEATURES OF THE FESTIVAL

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EXHIBITIONS

London
 South Bank Exhibition May 4 - September 30
 Festival Pleasure Gardens, Battersea Park . . . May - November 3
 Exhibition of Science, South Kensington May 4 - September 30
 Exhibition of Architecture, Lansbury, Poplar May 3 - September 30
 Exhibition of Books, Victoria & Albert Museum May 5 - September 30
 1851 Centenary Exhibition, Victoria & Albert Museum May 1 - October 11



Glasgow
 Exhibition of Industrial Power, Kelvin Hall . . . May 25 - August 18
 Exhibition of Modern Scottish Books . . . June 1 - July 28

Edinburgh
 'Living Traditions'—Exhibition of Scottish Architecture and Crafts . . . June 23 - September 8
 Exhibition of 19th Century Books . . . August 3 - September 13

Belfast
 Ulster Farm and Factory Exhibition . . . June 1 - August 31

TRAVELLING EXHIBITIONS

By Land
 Manchester . . . May 5 - 26
 Leeds . . . June 23 - July 14
 Birmingham . . . August 4 - 23
 Nottingham . . . September 15 - October 6

Festival Ship "Compass"
 Southampton . . . May 4 - 14
 Dundee . . . May 15 - 25
 Newcastle . . . May 30 - June 15
 Hull . . . June 20 - 30
 Plymouth . . . July 3 - 14
 Bristol . . . July 18 - 28
 Cardiff . . . July 21 - August 11
 Belfast . . . August 15 - September 1
 Birkenhead . . . September 5 - 14
 Glasgow . . . September 18 - October 6

ARTS FESTIVALS

London Season of the Arts May 3 - June 30
 Aberdeen Festival . . . July 30 - August 13
 Aldeburgh Festival of Music and the Arts . . . June 8 - 17
 Bath Assembly . . . May 20 - June 2
 Belfast Festival . . . May 3 - June 20
 Bournemouth and Wessex Festival . . . June 3 - 17
 Brighton Regency Festival . . . July 15 - August 25
 Cambridge Festival . . . July 30 - August 18
 Canterbury Festival . . . July 18 - August 10
 Cheltenham Festival of British Contemporary Music . . . July 2 - 14



Dumfries Festival . . . June 24 - 30
 Edinburgh International Festival of Music and Drama . . . August 19 - September 8
 Glyndebourne Opera, Mozart Season . . . June 20 - July 21

Inverness 1951 Highland Festival . . . June 17 - 30
 Liverpool Festival . . . July 22 - August 12
 Llangollen (International Musical Eisteddfod) . . . July 3 - 8



Llanwrst (Royal National Eisteddfod of Wales) . . . August 6 - 11
 Norwich Festival . . . June 18 - 30
 Oxford Festival . . . July 3 - 16
 Perth Arts Festival . . . May 27 - June 15
 St. David's Festival (Music and Worship) . . . July 10 - 13
 Stratford-upon-Avon (Shakespeare Festival) . . . March 24 - October 27
 Swansea Festival of Music . . . September 16 - 29
 Worcester (Three Choirs Festival) . . . September 2 - 7
 York Festival . . . June 3 - 17

OTHER EVENTS

London Festival of British Films June 4 - 17
 Edinburgh
 Gathering of the Clans . . . August 16 - 19
 International Documentary Film Festival . . . August 18 - September 8
 Cardiff
 Pageant of Wales . . . July 25 - August 6
 St. Fagan's Folk Festival . . . July 16 - 28
 Dolbreddre, Merioneth Welsh Hillside Farm Scheme . . . May - September

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Figure 1. "Features of the Festival", part of *The Times Festival of Britain Supplement*, 1 May, 1951, p.4.

of British design,¹² with the Council of Industrial Design one of the organizing bodies. It is worth noting that even at this stage there was a strong sense that 'good' design was based on wide ranging research:

The Festival's designs, organized around solving 'problems' that might be found in the home, were underpinned by technical research into building and social science, and advice given by an expert panel of economists, a housing centre worker, a social historian . . . and a Board of Trade official. To qualify for the full design fee, section designers had to demonstrate they had carried out a large amount of social science research into ideal environments in which families could function, and design research into issues such as how to heat a room cost-effectively . . . This removed the immediate focus from what was fashionable or affordable, on to supposedly universal problems such as dripping teapots and draughty windows.¹³

Throughout the latter half of last century, a number of design initiatives emerged in the UK, with the most recent, the *Restarting Britain* initiative outlined in two reports in 2012 and 2014, which promotes of the value of design to industry. As noted above, Aoteoroa has also seen a number of initiatives directed at promoting the value of design to industry, and we can observe *design thinking* as an emerging strategy in these promotions.¹⁴

From its emergence in the 1980s, *design thinking* is now known and practiced across fields from healthcare, business management, and science, to social innovation.¹⁵ Perhaps the most significant emergence of the current notion of the term came from the design company IDEO, which was founded in 1991¹⁶ with *design thinking* as its predominant approach to design innovation. After recognizing its value in their own practice, founder David Kelley initiated a new Institute of Design at Stanford to teach 'design thinking and strategy to business, engineering, and design students'.¹⁷ The practice was also popularized by a demonstration in 'Reimagining the shopping cart', an episode of ABC's *Nightline*.¹⁸ Indeed NZTE's Better by Design instituted a study tour to IDEO and Stanford d.school in 2013¹⁹, and might be seen, from a Foucauldian perspective, as one of the key authoritative voices establishing and propagating the discourse in a New Zealand context.

THE HUMAN-CENTERED APPROACH

Design thinking is defined by IDEO president and current CEO, Tim Brown, as a 'human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements of business success'²⁰. The importance of this emergence is that *design thinking* is defined predominantly not as a discursive element for design discourse, but primarily for use in other industries. For example, the UK Design Commission report *Restarting Britain*,²¹ states that "'Design thinking" was a concept pioneered by IDEO to help companies understand how to think like designers in order to embed design in business practice'. Brown & Wyatt²² describe the shift in ways of understanding design:

Designers have traditionally focused on enhancing the look and functionality of products. Recently, they have begun using design tools to tackle more complex problems, such as finding ways to provide low-cost health care throughout the world. Businesses were first to embrace this new approach—called design thinking—now non-profits are beginning to adopt it too.

The emergence of design thinking as discourse can be seen in its rapid rise in popularity across numerous industries. In 1989, we can still see the term used in its general sense in *Design Discourse: History, Theory, Criticism*,²³ which describes how the various articles underpin 'new tendencies in design thinking' and notes 'those designers who tried to align design thinking with the scientific and technological values that were developing . . .' The new use of the term has seen a surge in its popularity over the last twenty years, with a significant increase in appearance in books from the 1930s to 2007; and scores of books in the last few years with the term as part of the title.²⁴

We can note this trend in the UK Design Commission's reports *Restarting Britain*. The first report from 2012 mentions the term *design thinking* a total of 4 times, while the second report, just two years later in 2014, has sixteen mentions. It suggests an expansive set of areas where design can be applied:

- Redesigning individual services
- Redesigning policies
- Moving beyond the idea of discrete services and redesigning what organisations as a whole do, i.e. systems-level design.

It also contends that the design professional might not only be involved in the spotting, researching and developing briefs for a problem, but should also be involved in working on the solution.

As noted, the primary field for *design thinking* has been that of management, heralded by practitioners like David Dunne²⁵ who notes Herbert Simon's claim for the 'establishment of a rigorous body of knowledge about the design process as a means of approaching managerial problems'. Similarly, Boland & Collopy highlight the possibilities for the relationship between design and management, noting their exploration of 'the intellectual foundations for approaching managing as designing'. Boland & Collopy's²⁶ volume is an edited collection of selected papers from a 2002 workshop on 'Managing as Designing', to discuss how 'knowledge of design could benefit the practice of management'²⁷. Roger Martin, Dean of the Rotman School of Management at the University of Toronto, describes the influence of IDEO's designing of the 'entire consumer experience'²⁸ and the development of the perspective that companies have to reorganize to become like 'design shops in their attitude and work methods',²⁹ referencing the notion here of 'wicked problems' and 'collaborative integrative thinking'. Martin also emphasizes the rising popularity and acceptance of design within the business community, noting that '*Fast Company's* design issue last year was the biggest selling issue in the history of that company'³⁰. Breen's³¹ article for *Fast Company* interviews various 'visionary men and women who are using design to create not just new products, but new ways of working, leading and seeing', noting the 'key design principle' of collaboration; and cites Martin's statement that design 'has emerged as a new competitive weapon and key driver of innovation'.

Design thinking has become transformed from a general meaning of 'the way that designers think' to a rubric for a range of specific, institutionalized practices. In Foucauldian terms, it incorporates a language, historical trajectory, a place in key educational and industrial institutions, and a set of theorists and practitioners, all of which act to validate and propagate the discourse³².

To recognize the validation of *design thinking*, it is worth considering the validation of its key components:

Complex problems and the creative process.

The understanding that many design problems are complex and cannot be adequately approached with linear, scientific thinking. *Design thinking* emphasizes a creative process, open to possibilities of seeing each *solution* as a possible starting point for further investigation and creative possibilities; including the ability to revisit and redefine the initial problem. This may involve the creation of multiple pathways and solutions, both possible and impossible, as ways of exploring new terrains. This also involves moments of unexpected discovery.

Collaboration: Customer/user centeredness

Involving the customer in design stages; with particular emphasis on the emotional as well as intellectual impressions, needs and desires. This also involves an investigation of all aspects of design use for the consumer and other stakeholders, beyond the simple construction of a product or service.

Collaboration: Stakeholder involvement in the design process

The involvement in the design process, of different personnel who may administer or otherwise interact with, the end design solution.

COMPLEX PROBLEMS AND THE CREATIVE PROCESS

A number of key works and circumstances can be seen as forming the validating foundation of the *design thinking* approach. An early emergence of design as a 'way of thinking' is presented in Herbert Simon's volume *The Sciences of the Artificial*,³³ originally published in 1969. Simon regards design as the key discipline that allows ways of thinking that recognize the fundamental patterns within the modern complexity of subjects from the fields of economics, administration, computing and human psychology. He regards design primarily as a process, practiced generally: 'Everyone designs who devises courses of action aimed at changing existing situations into preferred ones'³⁴



Figure 2. Inside spread from: 'The Value of Design to New Zealand: A study highlighting the benefits and contribution of design to the economy of New Zealand'. A report by DesignCo released on the 26th of July, 2017 which estimated that design contributed 4.2% of GDP in the year to March 2016.

and 'we can conclude that, in large part, the proper study of mankind is the science of design . . . as a core discipline for every liberally educated man'.³⁵ This approach suggests the notion that anyone can access design thinking; an important proposition for the development of a *design thinking* notion which invites contributions not only from designers, but from all participants and stakeholders in a design proposal, from consumers, to managers, IT professionals and other staff that might be involved with the design outcomes.

This approach is supported by numerous publications on design and exemplified in Cross,³⁶ who states that 'design thinking is something inherent within human cognition; it is a key part of what makes us human'. Although Cross's work is largely concerned with traditional notions of design thinking, it also introduces the important aspect of usability, and the practice of bringing to bear in the design process, of the opinions and advice of non-designers who have experience of the product category.³⁷

To suggest that a process is a natural part of being human runs the risk of devaluing it as a valid methodological approach, and a number of sources have been activated to contend that design thinking is as valid as traditional scientific approaches. One could argue that the emergence of design courses at polytechnics and universities in the 1980s and, in particular, the emergence of postgraduate programs using practice-based design methodologies, saw an increasing demand for the design process to be recognized as valid research. One key source here is the work of Donald Schön,³⁸ which uses the notion of 'reflection-in-action', whereby the design practitioner 'may reflect on practice while they are in the midst of it'. He suggests the process emerges as a result of complexity in the problem:

Because of this complexity, the designer's moves tend, happily or unhappily, to produce consequences other than those intended. When this happens, the designer may take account of the unintended changes he has made in the situation by forming new appreciations and understandings and by making new moves. He shapes the situation, in accordance with his initial appreciation of it, the situation 'talks back,' and he responds to the situation's back-talk.

We can note here a foregrounding of one of the key elements of *design thinking*—that notion that designers deal with complex problems which must be approached through non-linear, reflective, back-and-forth thinking. Schön also notes that, in opposition to logical, linear thinking, the element of surprise becomes significant in reflective thinking:

Much reflection-in-action hinges on the experience of surprise . . . when intuitive performance leads to surprises, pleasing and promising or unwanted, we may respond by reflection-in-action.

Schön makes a powerful argument for the validity of these designerly ways of thinking, basing his enquiry in the context of a crisis in thinking, whereby traditionally validated methods have proven incapable of dealing with the complexity of current problems. He calls for 'not only analytic techniques . . . but the active, synthetic skill of "designing a desirable future and inventing ways of bringing it about"'. Schön's work gained considerable attention from design theorists, becoming required reading for many postgraduate design students attempting to justify their methodology in practice-based enquiries.

We see complexity of the process reiterated in Lawson,³⁹ who notes the indeterminacy of design solutions: 'In some kinds of design one knows exactly where one will end up, in others one has very little idea'.⁴⁰ Design thinking, in its general use, however, was brought to public attention in 1987 through the book of the same title, by Peter Rowe⁴¹. Rowe noted at that time that 'there is no such thing as *the* design process in the restricted sense of an ideal step-by-step technique. Rather . . . designers move back and forth between the problem as given and the tentative proposals they have in mind.'⁴²

COLLABORATION: USER FOCUS

In 1992, Richard Buchanan published one of the key articles to discuss design thinking, 'Wicked Problems in Design Thinking',⁴³ based on a paper delivered at the *Colloque Recherches sur le Design* in 1990. In this, he traces the emergence of design thinking to the 'cultural upheaval that occurred in the early part of the twentieth century'⁴⁴ and notes John Dewey's notion of a 'new relationship between science, art and practice'⁴⁵ and his particular conception of *technology* as 'an art of experimental thinking'.⁴⁶ Buchanan develops in this article an argument for a number of the discursive elements of the current notion of *design thinking*. Firstly, he suggests both the key role of the designer, but concurrently the broad inclusiveness of design thinking, noting its foundation in the liberal arts, which he suggests is:

a discipline of thinking that may be shared to some degree by all men and women in their daily lives and is, in turn, mastered by a few people who practice the discipline with distinctive insight and sometimes advance it to new areas of innovative application.⁴⁷

He also rejects the limiting of design thinking to specific design professions, suggesting instead that these areas are 'places of invention shared by all designers'.⁴⁸ Furthermore, he incorporates the notion of experience design, whereby 'the problem should be studied from the perspective of the flow of customer experience'.⁴⁹ Buchanan defines design thinking as different from linear scientific thinking because of its focus on *wicked problems*, a concept borrowed from Karl Popper and developed by Horst Rittel in the 1960s. Rittel suggests that wicked problems have no true or false solutions, only good or bad ones, always have more than one possible explanation, and are always symptoms of another 'higher level' problem.⁵⁰

We have here a corpus of works that act as a validating foundation for design thinking generally, and in turn, *design thinking* in its current form, as a systematic and multifaceted approach to problem-solving, whereby design problems are recognized as often complex and unsolvable using traditional logical methods. These emphasize the importance of creative approaches that allow for re-defining the initial problem, and approaching it in multiple stages, and from new or previously unconsidered perspectives.

COLLABORATION: STAKEHOLDER INVOLVEMENT

A second key component of *design thinking* is an emphasis on collaboration with clients, other stakeholders, and perhaps most importantly, consumers. This may be through involving them in early assessments of the design problem, or observational research in the development phases.

Design thinking is about using intensive observation – of customers and potential customers, work and social patterns, and global trends – to uncover latent needs, and applying teamwork, experimentation and expertise to figure out ways to meet them. It goes against the popular idea that clever innovation is usually the product of backroom inventors or singular genius, but is instead a creative approach to problem-solving that businesses can learn to master as a source of commercial advantage.⁵¹

Østergaard⁵² notes that a key part of IDEO's approach is a shift from designing customer products to designing customer experience. Yet, although this is a key component of *design thinking*, it is important to recognize that it has long been a practice in a number of design organisations, and perhaps the significance of the current design thinking approach is more in the priority this is given within the process. Marketing, for example, has for many years focused on the customer experience. Their toolbox has included consumer experience reviews, focus groups prior to product release and powerful techniques of market segmentation and analysis, such as the VALS system. This system, initiated by Strategic Business Insights (SRI) is directed at market analysis through consumer behaviours, demographics and psychographics:

The original VALS, launched by SRI in 1978, was a response to SRI studies of the fragmentation of U.S. society in the 1960s and the implications of those changes. The 1960s was also when the advertising industry was transforming to integrated marketing. Advertising visionaries encouraged SRI to extend its work into a marketing tool. SRI's pioneering method of applying psychographics to business management and marketing research enabled marketers to use VALS as a way—beyond demographics—to think of consumers.⁵³

We can also see that, as early as the 1980s, both involving the client in early stages of the design processes, and designing for the total customer experience were already recognized as key components of successful design strategy. One of the most innovative advertising

and design companies of this period, Bright and Associates, had an approach which incorporated both of these perspectives. In Konishi's interview with Keith Bright, Bright describes the company's emphasis on the total consumer experience:

Around 1982 Jay [Chiat] phoned Keith with an odd request “Can you design dinner ware?” He was going to meet the owners of Holland America Cruises and he wanted to take on the account, including looking at the identity in all applications'. What transpired was a two-year, \$5 million program that took Bright onto a different level of branding company . . . Keith considered the whole cruise experience from the first interaction at the travel agent's office all the way through the cruise to its memorabilia. In executive and consumer interviews, Bright identified various points of passenger confusion or disappointment. They also took an inventory of all printed materials, photographed signage at the airports, docks and on board, and they looked at every point of interaction between the cruise brand and the passengers.

'We looked at the arc of a cruise and extended the experience to include selecting the cruise and receiving tickets in a special wallet. We wanted to get the passengers committed to the trip and ensure the planning and buildup was part of the trip's excitement. The cruise itself should then consistently deliver on the experience.'

The program was thorough. It included all utilitarian and directional signage, tickets, brochures, boarding material, even door hangers and ensuite informational items; themed restaurants—signage, menus, wall artwork; all uniforms, travel bags and trip merchandise.⁵⁴

In terms of collaborating with clients and other stakeholders, this too has emerged from historically successful practices in the design industry. New Zealand graphic designer and art director, Warren Smith, was interviewed as part of the Tūhono Toi Hoahoa: Advertising and Design History Research Archive, due for launch in 2018. In this, Warren describes the process being used by Bright and Associates in 1988, which incorporated client feedback from the early stages of the process.



Figure 3. Keith Bright (R) works with a wall of multiple iterations in Bright and Associates' early branding success. Reprinted with the kind permission of Tania Konishi.

I worked for Bob Harvey and McHarman Ayer and I was creative director for a little while. I was mainly art director. Bob Harvey had an opportunity . . . they had the New Zealand Steel account, and Bob came back one day from a briefing by New Zealand Steel. They wanted us to do a totally new campaign for New Zealand Steel. When we sat down in the agency to talk about it, Bob Harvey said, 'There's a bigger problem here and that is that New Zealand Steel looks and sounds like a scruffy little organisation. They don't project themselves as being big and powerful and strong. If we're going to do advertising . . . we need to fix that as well. I've just come back from a trip to America and I've hired a design company called Bright and Associates to do a new corporate design. We have to travel to America for the first presentation'. I got to go to Bright and Associates. It was just a revelation.

Anyway, we go there and it was the first time I'd ever seen a way of doing things that was beyond the kind of, 'I'm the designer. This is what you shall do.' The philosophy was

really good, and I've used it ever since, and it works. They said, 'Okay, guys. You're here because you've given us a brief. We've done lots and lots of work, and your job today is to eliminate the stuff that you don't like of what we've done'. We went into a room about as big as this. There was a coffee table, couple of perks and sandwiches, and they said, 'You're not allowed to come out until you've picked out six designs'. Now, on the wall on A4 sheets, or their equivalent, were black and white designs of every geometric symbol you could possibly imagine. There were hundreds of them. Literally hundreds. The whole room was lined with all of these things, and then at one end, there was a whole lot of logos and different typefaces. They said, 'Your job is to pick out six that you like, and we reserve the right to put into that a seventh, if you don't pick the one that we think has got the legs to go all the way'.

It took us an age. We were shifting things around. We ended up with six and it was good. They said, 'Right, okay. We're going to take those and we're now going to incorporate those. We'll do colours and we'll apply them to stationary and one or two objects, like a mug and a souvenir ruler or something'. They came to New Zealand to do the second and we took them on the big tour. It was great.

I said to them at the end of it all . . . 'I'm very interested in the way you operate'. They said, 'Look. It's a very, very simple principle. If you could get the client to contribute to the decision-making process, you won't have as many arguments. You won't waste money as much'. He said, 'Until you really get to the very end of it, they're involved up to their necks in the whole lot just as much as you are'. He says, 'You have any arguments, have them at the beginning. That's the best time to do it, because it clears the air'.

We can see here, a clear sense of the recognized value of incorporating clients in the actual process of development of the design, from the earliest stages of development, as well as in follow up sessions along the design trajectory. This is one of the key components of *design thinking*, and, along with an approach of designing the total user experience noted above, could be considered a significant early emergence of what today comes under the *design thinking* rubric.

It should be noted that current notions of design thinking are not without detractors and a number of commentators—in some

cases, previous design thinking advocates—have begun to question its current definition or its validity⁵⁵. It seems, however, in spite of these reservations, that the discourse continues to expand, with each year seeing increasingly more design thinking courses and related industry positions developing.

CONCLUSION

One could argue that a primary focus of *design thinking* is the education of industry to the valuable role of a designer or design team in assisting with the instigation and management of design processes to assist in finding solutions for a wide range of issues that industry currently finds problematic. In New Zealand, the discourse has made significant inroads, with numerous companies now offering design thinking courses and services⁵⁶, and a current Seek⁵⁷ search delivering 55 results for design thinking jobs, and Linked-In⁵⁸ a total of 99. As such, it is also reshaping the discourse of design itself, in New Zealand and elsewhere. We should observe, however, that the key components of *design thinking* are neither unique to *design thinking* arena, nor new, and have traceable historical emergences prior to the unification of them under the rubric *design thinking*. Using a Foucauldian lens and explicating current notions of *design thinking* as emergent discourse, we can note a number of its central practices as based on the innovative approaches used in the design industry, and validated through a number of key theoretical texts. This allows us another avenue from which to observe the strategic argument for its place and significance in the future of New Zealand's industrial and social development, both of which have ramifications in terms of Government funding, pedagogy, and New Zealand's global economic position.

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32 Johansson-Sköldberg et al. provide an excellent resource which outlines the history in terms of two discourses, whereby 'design thinking' and 'designerly thinking' are suggested as two separate but related discourses. Whilst this is a valid position, it is more useful here, given the significant cross-over, to see the two as components of the one discourse.

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