Article

From Design Thinking to Art Thinking with an Open Innovation Perspective—A Case Study of How Art Thinking Rescued a Cultural Institution in Dublin

Peter Robbins [1,2]

[1]   School of Business, Dublin City University, Dublin 9, Ireland; peter.robbins@dcu.ie; Tel.: +353-1-7006500
[2]   Department of Design Innovation, Maynooth University, Co. Kildare, W23 F2K8, Ireland;
      Peter.robbins@mu.ie; Tel.: +353-1-7083647

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Abstract: This article uses a contemporary and revelatory case study to explore the relationship between three conversations in the innovation literature: Design Thinking, creativity in strategy, and the emerging area of Art Thinking. Businesses are increasingly operating in a VUCA environment where they need to design better experiences for their customers and better outcomes for their firm and the Arts are no exception. Innovation, or more correctly, growth through innovation, is a top priority for business and although there is no single, unifying blueprint for success at innovation, Design Thinking is the process that is receiving most attention and getting most traction. We review the literature on Design Thinking, showing how it teaches businesses to think with the creativity and intuition of a designer to show a deep understanding of, and have empathy with, the user. However, Design Thinking has limitations. By placing the consumer at the very heart of the innovation process, Design Thinking can often lead to more incremental, rather than radical, ideas. Now there is a new perspective emerging, Art Thinking, in which the objective is not to design a journey from the current scenario, A, to an improved position, A+. Art Thinking requires the creation of an optimal position B, and spends more time in the open-ended problem space, staking out possibilities and looking for uncontested space. This paper offers a single case study of a national arts organisation in Dublin facing an existential crisis, which used an Art Thinking approach successfully to give a much-needed shot in the arm to its commercial innovation activities.

Keywords: Art Thinking; Design Thinking; creativity; innovation; strategy

1. Introduction

Recent literature suggests that if enduring and sustained attention for a topic is an indication of its value, then Design Thinking merits considerable further scrutiny [1]. The motivation for this paper is to add to the recent scholarship on Design Thinking, but also to contribute to the foundation of an emerging dimension of Design Thinking: Art Thinking [2]. Promoters and critics differ in their assessment of the value of the process [3] of Design Thinking and its user-centricity [4–6], which can tend to anchor solutions in more prosaic and incremental territory. Art Thinking, by contrast, has the capacity to liberate its practitioners from the user experience that characterises Design Thinking and can thus offer more creative, radical and disruptive options [2].

In Dublin, we examine a case of the oldest, largest and most prestigious fine art gallery and studio, where most of the country's best-known and successful visual artists make, exhibit and sell their art. Graphic Studio Dublin is primarily a printmaking studio, established by artists 60 years ago. It has facilities for woodblock, lino-print, silkscreen, intaglio and carborundum etching spread over four floors of a centrally located studio where the artists have access 24/7. However, two years

ago, it found itself on the brink of bankruptcy, having borrowed heavily to invest in new facilities during the period of Ireland's economic collapse. Its loans were sold to a vulture-fund who were about to foreclose in a move that would have seen a generation of Irish artists displaced. This was compounded by the collapse of GSD's twin engines of revenue: state funding and consumer demand for fine art. A new board of directors was empanelled, and they introduced Art Thinking principles to rescue the organisation from the brink of bankruptcy. They used an Art Thinking mindset and Design Thinking tools to restore the fortunes of this venerable, artist-led institution and Graphic Studio Dublin was saved.

This paper is structured as follows: it opens with a description of the turbulent commercial operating environment that exists for most organisations and can be particularly acute for arts organisations. These complex conditions require a managerial finesse, a blend of creative and scientific thinking, which is present in Design Thinking. Hence, a literature review of Design Thinking follows. Towards the end of the literature review, we discuss an emerging concept, Art Thinking, which offers a more deliberate creative approach. There is a brief rationale included for the selection of a case study and, in particular, an outlier one. In the following section, we introduce a revelatory case study of a national arts organisation in Ireland whose finances were dangerously overstretched during the recession, leading it to the brink of collapse. We describe how a combination of Art Thinking and Design Thinking managed to rescue the organisation from the brink. There follows a section on conclusions and recommendations.

2. Literature Review

This section will provide an overview of the literature on Design Thinking, within which its history, its overarching principles and various tools will be identified. It will conclude with a review of the slender volume of scholarly output on the concept of Art Thinking.

Volatility, Uncertainty, Complexity and Ambiguity, the acronym VUCA, was coined originally to by the US military during the Gulf War to describe the conditions of the frontline [7]. Latterly, this is the description given to the cut and thrust of the digital revolution [8]. The turbulence it describes is increasingly being seen by business leaders as the 'new normal'. Volatility indicates chaos where reliable prediction is impossible and where change is regular and substantial [8]. Uncertainty refers to the difficulty in interpreting coherent patterns in the change (Ibid). In uncertain environments, the connections between cause and effect are understood, but the scale and timing of the changes are not. By complexity is meant the complex ecosystem of moving parts in any market. It describes iterations of simple patterns [9] combined in a labyrinth of overlaps and loops making it difficult to decipher the signal from the noise [8]. Finally, ambiguity refers to our lack of capacity to read the signals from markets or consumers with any clarity, certainty or accuracy. In a recent editorial about design, Time Magazine, underlining the growth in importance of design, reported:

> 'In this new era, smart corporate leaders are embracing the idea that design can be a crucial differentiator. Only a decade ago, senior business executives tended to dismiss design as a second-tier function—a matter of aesthetics or corporate image best left to the folks in marketing or public relations. Today design is widely acknowledged as a C-suite concern and a key element of corporate strategy.' [10]

Fortune Magazine [11] reports that smart business leaders are embracing the idea that design—channelling insight to delight and truly connect with customers and users can be a crucial differentiator. Kimbell [12] notes that the term 'Design Thinking' has come to the fore among educators, academics, managers and the design community as a way to distinguish between the technical, craft skills of actual designers, and a way of approaching business or management problems that reproduces, in a simplified way, the approach a designer might take. Businesses look at it as a way to balance the natural tension between 'explore and exploit' [13], or as a plug-and-play creative process to kick-start innovation [14].

Evidence of the arrival of Design Thinking as the preferred approach for business to successfully facilitate innovation is not hard to find. Design thinking is especially suited to VUCA conditions [7] because it enhances organisational learning, improves organisational absorptive capacity and it approaches these complex and ambiguous problems from the perspective of the customer. On retail bookshelves, popular management books on Design Thinking, compete for space [14–17]. Prominent articles have also been appearing in top academic management journals, such as the Academy of Management Journal (2015) and the Journal of Product Innovation Management (2015, 2018), as well as in management journals like the Economist and the Harvard Business Review, Business Week, The Wall Street Journal and the New York Times [18]. However, the overwhelming evidence of its success comes from all the companies who have adopted it. As Kolko [19] puts it, there is a shift underway, one that puts design much closer to centre of the enterprise. Curedale [17] lists a selection of these organisations which, inter alia, include: SAP, GE, Target, Pepsi, Whirlpool, Bayer, Mayo Clinic, DHL, P&G, Philips, Airbnb, GSK, Nike, Airbus, Panasonic, Shell, Cisco, Unilever, JetBlue, Black & Decker, IDEO, Intuit, Mattel, Bank of America and Microsoft.

Design Thinking has gained traction not just with the corporate sector but also with government bodies. Kimbell [12] notes that:

> 'In the UK, for example, the government-funded national Design Council, argues that Design Thinking plays a key role in innovation (Design Council 2009). In Denmark, a cross-ministerial innovation unit called MindLab combines design-centred thinking and social science approaches to create new solutions for society.'

Ireland is also becoming a hotbed of Design Thinking as a consequence of hosting local operating units and sometimes R&D centres for many of these companies. However, in case there could be any doubt of the all-pervasive nature of Design Thinking, this was dispelled when Bank of Ireland, the country's oldest (230 years old) and, arguably, most conservative bank, hired a head of Design Thinking in 2015. Equally, when the practice of *project management*, traditionally focused exclusively on the 'solution space' declares they need to embrace Design Thinking's approach, its capacity and tools to clarify and elaborate on the 'problem space', you can tell things are changing [20].

Professional services have also joined the party with Accenture snapping up Fjord, a global design agency, in 2013. PriceWaterhouseCoopers (PwC) acquired BGT, a digital creative consultancy while Ernst & Young (EY) bought a design agency called Seren. In Ireland, Deloitte acquired Red Planet, and internationally, they bought Doblin and Monitor, both design-driven, innovation agencies. McKinsey bought Lunar, a design agency based in Silicon Valley, in 2015.

3. But, What Exactly is Design Thinking?

Liedtka [18] acknowledges that while a generally accepted definition of Design Thinking has yet to emerge, all definitions share one or more common elements (see Box 1). Nigel Cross [21], one of the key authors on the topic deliberately sets a very broad definition:

'We all design when we plan for something new to happen, whether that might be a new version of a recipe, a new arrangement of the living room furniture . . . The evidence from different cultures around the world, and from designs created by children as well as by adults, suggests that everyone is capable of designing. Therefore, Design Thinking is something inherent within human cognition: it is a key part of what makes us human'.

Lockwood [22], a former President of the Design Management Institute, suggests Design Thinking is:

> 'a human-centred innovation process that emphasises observation, collaboration, fast learning, visualisation of ideas, rapid concept prototyping and concurrent business analysis.'

Mootee's [16] definition focuses more on the process and defines Design Thinking as:

'the search for a magical balance between business and art, structure and chaos, intuition and logic, concept and execution, playfulness and formality and control and empowerment.'

Mintrom and Lietjens [23], whose emphasis is on the policy arena, assert:

'Design thinkers exhibit curiosity and empathy in their efforts to interpret how target populations engage with their world. They deploy various investigative techniques that have the potential to illuminate problems in new ways and indicate effective client focused solutions.'

Like marketing, Design Thinking foregrounds the wants and needs of consumers, but Curedale [17] notes that Design Thinking has moved past and is superior to marketing. Far from being merely a tool of the marketing armoury, where it helped, through advertising and packaging, to make people want things, it is now about designing things people actually want. What connects the definitions is that Design Thinking is invariably user-centred and founded, ideally, on some actionable insight. It is highly visual and relies on customer observation, developing thick, rich ethnographic portraits of customer behaviour and trying to identify themes and patterns (unmet or under-served needs) from the observations.

But unlike Marketing, Design Thinking assumes that the problem is ill-defined and focuses on precision, insight and accuracy in defining the real problem. Box 1 below includes a summary of the elements typically comprised in a design thinking approach. Specifically, the inclusion of customer, consumer or 'end-user' perspectives in finessing the problem facilitates a better comprehension of the issue and when this superior understanding is coupled with creativity then it is more likely that the solution will be based on higher ground rather than common ground [24].

Design Thinking classifies consumers into discrete segments and develops individualised personas for each segment, these are usually developed after an intensive period of observation, watching what people do and listening to what they say [25]. The next step is to use brainstorming techniques to generate novel, original and radical ideas for each segment. The generation of ideas is an interdisciplinary group exercise; it brings in multiple viewpoints and multiple stakeholders and challenges assumptions. Then ideas are prototyped as either simple, written or illustrated concept-boards or as more refined artefacts. Then field experiments are designed to measure the appeal of the ideas and to discover whether they might find traction with the target market [26].

Box 1. Conventional elements of a Design Thinking process or approach.

Problem Definition—one that accurately describes the problem the initiative is trying to resolve or, alternatively, the opportunity it is attempting to exploit.
Insights and Empathy—an ability to 'walk in the users' shoes' and to understand their pains and gains is vital to being able to develop ideas likely to resonate with them. When the process uncovers genuine insights about what people do, why they do it, and how their experience can be improved, this can lead to better design criteria, and ultimately to great work.
Iterative Approach with a bias towards experiment and action—unlike traditional quantitative market research, where a little information is gathered about a lot of people, Design Thinking thrives on the opposite. It builds an intimate and vivid portrait of just a few people and tries ideas out with them. Designers do not follow a direct route from problem to solution, but instead move to and fro between problem(s) and solution(s). For instance, Cross indicates that 'designing does not proceed in a sequence of stages that targets each one of the (partial) problems initially identified or outlined. Instead, designing appears to proceed through an iterative form of interplay between partial problems and their solutions'.
Abductive Reasoning—Dunne and Martin [27] refer to this as the logic of what might be whereas deductive and inductive are the logic of what should be or what is. Abduction is more than just 'backing a hunch'. It is an approach in conventional problem solving when, according to [28] 'we know both the value we wish to create, and the 'how', a 'working principle' that will help achieve the value we aim for. What is missing is a 'what' (an object, a service, a system), that will give definition to both the problem and the potential solution space within which an answer can be sought.' Abductive reasoning is a key part of Design Thinking [29,30].

This process is most often found using a visual observation example, in which a person makes hypotheses or tries to explain some behaviour they've seen. It is very often also associated with the 'flash of insight' or the 'eureka moment' in a discovery [30]. But Design Thinking does not rely solely on abductive reasoning, it blends 'a cyclic combination of abductive, deductive, and inductive reasoning processes' (p. 42) [31]. Theory of 'designerly ways of knowing' emerged in the 1970s where the missing 'third area' of education was described as the piece that, depending on your perspective, either links or divides the sciences and the humanities—design thinking or thinking in 'designerly' ways [32].

An Ethnographic approach—deep, rich, vivid observations are deemed more likely to reveal actionable insights; hence, Design Thinking favours close observation, often in the form of actual participant diaries, video diaries, vlogs, photos, recordings where the emphasis is on capturing the customer behaviour at the key moments of truth in a customer experience.

Brainstorming and Ideation—finesse mild and wild ideas about potential opportunities. These tools encourage creative behaviours such as withholding judgment, avoiding debates and seeking higher-order thinking by building on the ideas of others and leveraging the diversity of the team. Cross [21] noted that science investigates existing forms but design initiates new forms, and it does this through brainstorming and other creative techniques.

Prototyping Techniques—these facilitate, making abstract ideas tangible and easy to understand and comment on by participants. Techniques include storyboarding, concept or mood boards, user scenarios, metaphor, experience journey maps and simple graphic illustrations [15].

Co Creation—incorporates tools and methods that allow consumers or users engage in the design of future product, service or experience ideas.

Learning Launch, Pilot and Field Experiments—are designed explicitly to test underlying assumptions in the field. Ideally, these are done in controlled environments, and latterly, crowdfunding sites like Kickstarter and Indiegogo have been very helpful in gauging likely future interest in proposed new ideas.

Liedtka [18] observes that none of these elements are new; individually, they can all be found elsewhere in management theory and practice. Similarly, Mulgan [33] observed that Design Thinking is 'a synthesis of methods drawn from many fields that, when sewn together helpfully mitigate the traditional limitations of their individual origins'. They conclude that when the elements are combined in and end-to-end process or programme (see Figure 1), Design Thinking emerges as a distinctive and valuable system of practice. Design Thinkers have to take what Dorst [34] calls a 'double creative step' by both designing new ideas or solutions and also testing and modifying them in parallel. This parallel creation defines design thinkers as very separate from traditional managers who rely, predominantly, on logical reasoning, data and analysis.
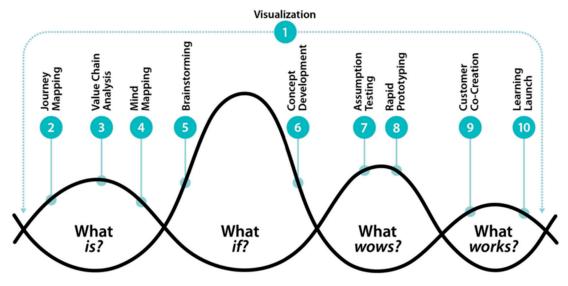

Figure 1. The Darden model of Design Thinking—an end to end sequence of tools [15].

Academics and practitioners alike now coalesce around broad definitions of Design Thinking that see it as a creative, iterative, hypothesis-driven process that is focused on both the problem and the solution. Relying on abduction and experimentation, it balances the twin drivers of possibility and

constraint and works best in situations of high complexity, ambiguity and uncertainty (in other words, VUCA environments). It has to navigate between customer wants and needs, client expectations, social circumstances, business models, opportunities in technology and contemporary aesthetic canons.

While some designers try to make their steps explicit, Cross [21] observes that others are deliberately, even wilfully, obscure when it comes to revealing the processes they use to arrive at great designs. Philippe Starck suggested that his was a 'magical' process of epiphany and, similarly, Alessi said ideas came to him in a 'vision'. However, a recurring theme in design research is the role of intuition [35], and it is the quality of this intuition that probably separates the best designers from the rest. An additional characteristic commonly possessed by designers is a capacity to dwell in a problem space where there can be an uncomfortable degree of ambiguity and apparently conflicting demands. Design Thinking, on the other hand, has evolved to eliminate, or certainly reduce, both intuition and ambiguity by providing a series of simple, stepwise templates that give users the comforting illusion of control over the process. In design, the quest is first for options, rather than solutions, and this is not always the case with Design Thinking.

3.1. The Way Designers Think

Davies and Talbot [36], in a series of interviews with designers, trying to understand what made them more creative than other professions, discovered that they rely heavily on *intuition* for their ideas. One of the interviewees, Jack Howe, an architect and designer, said 'I believe in intuition. I think that is the difference between a designer and an engineer' [37]. Today, a similar observation can be made about the difference between data-scientists and design thinkers. The latter use abductive thinking or intuition while the former rely exclusively on data. Cross [21] suggests that the term intuition is really a convenient shorthand for what really happens in Design Thinking which —as opposed to inductive or deductive thinking—is abductive thinking. Deductive reasoning is the reasoning of formal logic. It begins with a hypothesis, perhaps one such as: all swans are white. Then, some fieldwork is designed to either prove or falsify that hypothesis. This is the dominant orthodoxy for business analysis. This is the bread and butter of all MBA-trained executives. Inductive reasoning, however, aims to build theory from data. Hence, it does not begin with any firm hypothesis; it begins by observing how things actually are and then it builds theory accordingly. This is generally used in more qualitative contexts, where the variable being studied is highly context-dependent, like corporate innovation—how firms come up with winning ideas, for instance. Abductive reasoning is a blend of the two types that employs intuition to stimulate divergent thinking and, ultimately to arrive at more original ideas (see Box 1).

Quantitative, big data analytics are now synonymous with the digital business environment, but prevalent use of data mining methods rely exclusively on observations about past behaviour and are not necessarily a reliable guide to the future [7]. To thrive in the VUCA environment, businesses are increasingly turning to more sophisticated and sensitive frameworks and structures to allow them sense attractive market opportunities and seize them as they move more sharply into view [38].

Cross [21] offers a fascinating vignette in an attempt to deconstruct designers do. The case he describes is Philippe Starck's iconic design for a lemon squeezer. In the late 1980s, Philippe Starck was already a celebrated designer of a wide range of different products. He was approached at that time by Alessi. The Alessi company had begun to develop a new series of homeware or kitchen products designed by famous designers, including kettles and coffee pots by architects Michael Graves and Aldo Rossi and cutlery and condiment sets by industrial designers Ettore Sottsass and Roger Sapper. They invited Starck to contribute to this prestigious series of new products and they suggested that he work on designing a lemon squeezer. The story goes that Starck come to Alessi, outside Milan, to discuss the project and, following the meeting, took a short vacation on the small island of Capraia, just off the Tuscan coast.

While there, he dined in a pizza restaurant, called Il Corsaro (translated as the buccaneer or pirate). He mused over the lemon squeezer project as he waited for his food to arrive—he had ordered the

squid. He began to sketch on the placemat in the restaurant and his first iterations (in the centre to the right of Figure 2) reflected conventional squeezer designs; see Figure 2. However, as his food arrived, something else was triggered in his imagination and he began to create images of strange forms with big bodies and long legs. Ultimately, in the bottom left of the placemat, he arrived at the blueprint for what was to become one of the iconic designs of the 20th century.
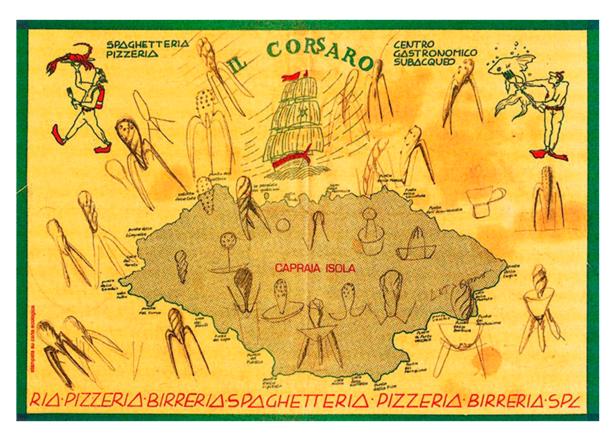

Figure 2. Starck's original design sketches for the Alessi lemon squeezer.

Lloyd and Snelders [39], in describing the probable creative trajectory for this great design, suggest that the squid-like concept was not a sudden flash of inspiration from out of the blue but that it arose from a form of analogy that probably began unconsciously but gradually became more deliberate. It is the intersection of three forms of parallel thought. The first is the problem of how to squeeze a lemon, the second involves creatively mining the possibilities offered by the shape of the squid and the third draws on Starck's interest and liking for science-fiction comic books in his youth and the unmistakable resemblance to some shapes, possibly from HG Wells' War of the Worlds.

However, as Design Thinking becomes more widespread, so its limitations become more evident. One such limitation is that inherent in Design Thinking is its user-centric approach. It places users in the centre of the process and gives them the dominant voice in the innovation dialogue. While customers are *the* necessary ingredient for any successful business, they are rarely gifted with imagination or penetrating insights about the future. They cannot anticipate unmet or unarticulated needs and they are rarely the source for radical ideas. Design Thinking tends to anchor innovators in the incremental and hence, while it is a great set of tools for businesses, it can constrain breakthrough thinking.

Another shortcoming concerns Design Thinking's core discipline being design. However, design has historically concerned itself with the design of objects, artefacts, products—physical things [40]. Famous designers are generally famous for designing in specific physical domains: Frank Gehry designed wonderful buildings; Coco Chanel designed beautiful clothes; Jonny Ive designed breathtaking phones and computers; Paul Rand designed memorable logos, while Ray and Charles Eames designed stylish furniture. Hence, as design expands its operating remit into services, into

experiences and even into strategy another problem can emerge. Brown and Martin [40] note that when designers take a brief, an issue or a business opportunity and go away to work their magic on the problem at hand, inevitably they return to the boardroom with their proposed solution and when they do, one of four things often happen. This scenario increases in likelihood with the degree of difference between the designer's proposal and the current operating model. The more the proposal deviates from the business-as-usual scenario, the more likely executives are to have this reaction: '(1) This does not address the problems I think are critical. (2) These aren't the possibilities I would have considered. (3) These aren't the things I would have studied. (4) This is not an answer that is compelling to me' (Ibid.). As a consequence, winning commitment to the strategy tends to be the exception rather than the rule, especially when the strategy represents a meaningful deviation from the status quo '. Fortunately, the toolbox of Design Thinking has an approach to manage this disconnect. Instead of making the proposed change look like a small number of big steps, they do the opposite and by iteration and low-res prototypes, they make the change seem like a logical sequence of lots of small, incremental steps.

In framing the relevance of this case study, it's worth noting that Design Thinking's association with the tourism and arts sector is already established; cases include the future of hotels [41], Indian artisanship [42], a cultural cluster in Dublin [43], and a wine region in Spain [44].

The Beginnings of an Art Thinking Movement

Whitaker [2] notes that Art Thinking shares several similarities with Design Thinking. They both provide a framework and tools for facilitating the design of a new product or service. An important distinction she draws is that 'whereas a framework originating in product design starts with an external brief—'What is the best way to do this?'—Art Thinking emanates from the core of the individual and asks, 'Is this even possible?'' Art Thinking spends much more time in the problem space: it is not customer-centred; it is breakthrough-oriented.

Coles [45] notes that there has always been a rift between art and design in our culture. He notes that purists on both sides are keen to maintain their disciplinary differences, while others believe that design is a suitable bedfellow for art and that art should be more 'gregarious' and reach out beyond its confines. Some see design merely as decorating art for human use and hence any such 'decoration' is undesirable. However, as early as 1859, Rushkin, showing little sympathy with this argument, insisted that:

> There is no existing higher order for art that is decorative. The best sculpture yet produced has been the decoration of a temple front—the best painting, the decoration of a room. Get rid, then, at once of any idea of Decorative art being a degraded or separate kind of art.

In his series of essays, The Shape of Things [46], the first essay is entirely devoted to the origin of the word 'design'. It stems from the Latin word signum meaning 'sign'. Thus, etymologically, design means to 'de-sign'. So far from adding unnecessary decoration, it entails the removal of something: a simplification. In the same essay, Flusser went on to elaborate on other words often used in the same context—such as technology. The Greek word techne actually means 'art' and is a first cousin of 'tecton', a carpenter. The basic idea here is that wood is a shapeless material to which the artist, the technician, the carpenter gives some design and form.

Therefore, in derivation and etymology, the words technology, art and design are very closely related. However, what Coles [45] calls 'modern bourgeois culture of the mid-nineteenth century' has created a very sharp distinction between the world of art and that of technology. This has split the culture and practice into two mutually exclusive branches: one scientific, data-driven and 'hard' and the other intuitive, aesthetic and 'soft'. This unfortunate split became irreversible with the rise the machine bureaucracy organisation [47]. Yet, the only discipline capable of bridging these two disparate worlds and of integrating them is design. In Flusser's [46] view, design indicates the sweet spot where

art and technology meet to produce new forms of culture, and so the role of design is crucial to the vitality of the arts and similarly, the role of art is at the very heart of design.

Science and art are separate realms where one prizes data and the other aesthetics: it has long been noted that gifted practitioners of the former and very often equally talented at the latter. Metz [48] notes that Einstein played both the piano and violin: Max Planck composed songs and even a full opera. He also played the piano, organ and cello. Roald Hoffmann, the Polish-American theoretical chemist who won the 1981 Nobel Prize in Chemistry also published plays and poetry. Nobel Prize winner in 1906, Santiago Ramón y Cajal was a celebrated photographer and artist. Pomeroy's research (2012) suggests that Nobel laureates in the sciences are 17 times more likely than (the average scientist) to be a painter, 12 times more likely to write poetry, and four times more likely to be a musician. Students of Leonardo Da Vinci or Albrecht Dürer will not be surprised at this, as they were also scientists, as well as being consummate artists. The link is thus long-established.

There is another dichotomy at work here, too, and that is the division between strategy and creativity. Bilton and Cummings [49] assert that this, too, is a false dichotomy. Business leaders often equate creativity (sometimes disparagingly) with novelty, spontaneity, like an unplanned eruption of new and often random ideas. They see 'creativity as unfettered, dynamic, borderline-crazy right-brain thinking' (p. 5). While strategy, on the other hand, is rational; it is solid, it is about systems, control and accountability. On both sides, creativity and strategy are seen as extraordinary opposites of one another rather than as integral to each other. For a strategy to be successful, it has to have an element of creativity within it—otherwise it would be a predictable, paint-by-numbers plan which would not offer any competitive advantage. In addition, for creativity to take root, for an idea to spread, it too needs to be framed strategically, rationally, otherwise it would just pop, fizz and evaporate. Arthur Koestler [50] similarly concludes that invention or discovery takes place through the combination of different ideas and angles. He notes that the Latin verb '*cogito*', to think, actually means to 'shake together' which is the creative act of making connections between previously unrelated things. In the business world, this is known as 'kaleidoscope thinking': the shaking together of known elements into previously unconsidered combinations [51].

Fresh perspective to this debate was brought when business and management guru, Daniel Pink said in a New York Times interview that the 'Now the Master of Fine Arts, or MFA is the new MBA'. Pink sees that much of the work of analytics and mathematics that is central to business can now be done better and more easily by computers and it is now time, given that we now compete in a creative economy, to allow the right brain take centre stage. Pink later converted this assertion into an HBR article [52] in which he explained the reasons for the rise in demand for creative people coupled with the oversupply with people with MBAs explains why the MFA is now the 'hottest credential' in the world of business.

Amy Whitaker's [2] book entitled *Art Thinking* is the first substantial effort to flesh out the notion of Art Thinking. In it, she has some practical insights. She describes the root of the concept to be Schumpeterian, insofar as capitalism is entirely predicated on change and the need for disruption and reinvention to stimulate business growth. Schumpeter asserted that if firms keep doing the same thing, eventually they go out of business. 'Following patterns rather than inventing new ones will only get you so far.'

Progress for any organisation demands that it be able to refresh its portfolio of market offerings, allowing the old products and services give way to its new innovations. Schumpeter [53] referred to this as creative destruction, where new ideas capsize and replace the old ones. Drucker [54] supported this paradigm when he said that 'innovation depends on organised abandonment'. Art Thinking is for companies seeking this type of growth, possibly even transformational growth. 'They can grow by scaling up to the most efficient level of production. Or they can grow artistically by the alchemy of invention.' Whitaker [2] recognises that this can be challenging for business because:

'Business prizes being able to put prices on things and to know their value ahead of time.
Yet, if you are inventing Point B, in any area of life—you can't know the outcome at the

moment you have to invest money, time and effort in the Point A world. This is the central paradox of business: the core assumptions of economics—efficiency, productivity and knowable value—work best when an organisation is at cruising altitude, but they will not get the plane off the ground in the first place.' (p. 8)

While Whitaker's emerging theory of Art Thinking has yet to be empirically tested, there is one mention of it in the literature: a 2016 conference presentation about the car brand Mazda [55] in which the authors assert that Mazda believe 'the car is art.' They underpin this contention, from interviews with 5 Mazda designers, by explaining that these artists try to express their emotions and beliefs in car design. They would not compromise themselves by pandering explicitly to customer needs. In doing this, they go beyond Design Thinking, which 'tries to meet specific customer needs', and they enter the realm of car design motivated by Art Thinking.

3.2. Case Study Rationale

Yin [56] specifies three types of case study: exploratory, descriptive and explanatory; while Stake [57] names two: intrinsic and instrumental. Yin considers case study to be better able to rationalise the causal relationships in real-life events than empirical research strategies. Case study methodology also has the capacity to vividly describe the situation under investigation, providing important contextual detail. It allows issues to naturally come to the surface, and in situations where the results or effects are indistinct, the case study methodology provides space to explore.

Art Thinking is a new and emerging concept in the innovation literature and one reason conventionally provided for using a single case study design is that the single case can represent a critical test of a significant theory [57]. It is too early in the development of Art Thinking to refer to it as a significant theory, but nevertheless, the choice of this single case study is to provide some confirmatory, should the data back it up, evidence of the promise of this new area of research. Another reason for choosing this single case is that the author has privileged access to 'a situation previously inaccessible' [58]. A third reason for choosing it is that there is longitudinal data available allowing analysis at different points in time.

3.3. Details of the Case Study

Strategic initiatives in the Arts include bringing in strategic frameworks or strategic management or generally importing approaches from the business world, often at the behest of senior managers, of government funders or other stakeholders like Board directors. Hence, 'strategy' in the arts is usually resented as something that is imposed from outside and something that needs to be tolerated temporarily till the recession or existential crisis recedes and the organisations get back on their feet.

The story of the recent history of Graphic Studio Dublin is the story of a highly creative strategy being applied to an Arts organisation with profound and positive effects; a story of how strategy rescued a national arts organisation from the brink of closure and ruin and restored its place in the visual arts ecosystem as well as restoring its fortunes. What makes it exceptional and, therefore, revelatory, is that it deals with an organisation going through a crisis. However, in order to tell the story, like all good research subjects, it needs a little context. This context requires a visit to 1960s Dublin. Ireland in the mid-twentieth century was delicately balanced between an economic isolationism imposed both by the end of the second world war and by a political leader who favoured self-sufficiency and protectionism, which turned into the twin drivers of economic stagnation for almost a decade. On the other hand, and despite the economic stasis, the arts were seeing an expansion; a cultural revival.

Several notable, even defining cultural initiatives took place in Ireland at this time in both public and private spheres: the establishment of the Wexford Opera Festival, the Dolmen Press, the Arts Council, the Dublin Theatre Festival, and the Irish Georgian Society. In terms of policy, too, there was the launch of TK Whitaker's 1958 Economic Development Plan (which was Ireland's blueprint out of self-imposed economic atrophy), the launch of Ireland's first national television

broadcasting service called *Telefis Eireann*, the publication of *Design in Ireland* by the Scandinavian Design Group, and the opening of the Kilkenny Design Workshops in 1965. Ireland was also opening up to international cultural influences. During the 1960s, the Beatles performed in Dublin, as did Ella FitzGerald, The Rolling Stones, Oscar Peterson, Cliff Richard, Louis Armstrong and Bing Crosby.

One other remarkable development in Ireland occurred at this time: Shannon, the first new town founded in Ireland since the 17th century, was established in 1963 and was based not around a harbour or a fortress, nor a market (as all towns had been since Medieval times). Rather, it was located at an airport. Shannon and the other institutions mentioned were all responding to significant gaps in the cultural, educational and economic landscape in Ireland at that time.

However, while there was considerable change, the air was also heavy with continuity, certainly in the Arts. The fact that the Arts Council had been overseen for over a decade by two priests in succession, Monsignor Padraig de Brún (1959–1960) and Father Donal O'Sullivan (1960–1973), now seems remarkable. There were nine board members of the Arts Council, and all were male, and as the leadership was coming from the most conservative pillar of Irish society, the Church, it is hard to imagine anything but the most conservative projects and initiatives getting financial support.

It was against this backdrop that in Ireland's cultural district, often called 'Baggotonia'—the Georgian streets around Merrion Square and Baggot Street- that Graphic Studio Dublin (GSD) was founded. It was created, by an eclectic set of founders (see Figure 3), for artists and it was led by artists. GSD was Ireland's first fine art print studio and for its first three decades, it struggled to survive, sustained only by idealism and a grim determination to provide shared facilities so that talented artists could make important art. The chronicler of the organisation, Brian Lalor, in his book, Ink Stained Hands [59] makes an insightful observation about the early years:

> Ink Stained Hands is the story of this triumph—over the absence of an informed critical climate and the absence of a marketplace, over infighting, personal antagonisms and feuds, over ideological differences and intransigence disguised as high principle and through a web of official misunderstanding—it emerged half a century later, invigorated with idealism and optimism intact and a lengthy inventory of artistic achievement to its credit. (p. XXIII)

The founders of the Graphic Studio were a group of five well-intentioned, hugely talented and diverse characters, each with a distinct and established profile in the arts. Their backgrounds spanned education, publishing, architecture, literary criticism and painting and printmaking. See Figure 3:

The Founders

Elizabeth Rivers	Anne Yeats	Liam Miller	Patrick Hickey	Leslie MacWeeney
1903–1964	1919–2001	1924–1987	1927–1998	1936
Born in England: studied at the Royal Academy	Daughter of WB Yeats: niece of painter Jack B Yeats	Lover of literature and theatre: Liam was an architect who worked with Michael Scott and was a typographer and publisher	Born in India and brought up in England. Returned to art college in Italy at age 30. He lectured in UCD on architecture and was, afterwards, head of painting in NCAD	Brought up in Dublin in wealthy medical and military family—with a governess. Entered NCAD at age 15, lying about her age. Prolific and gifted painter and printmaker, she now lives in Boston and has been an educator and art administrator
A founder member who taught night courses in wood engraving and woodcut. Designed the GSD logo	A competent painter but also experienced administrator	Set up Dolmen Press, an impact mainly for artists—managed the finances in GSD. The sponsor's portfolio was developed as a gift for the 75 initial subscribers/donors	The original master printer. Produced over 400 prints over 33 years with GSD	Her involvement with GSD waned after she left to live in US in 1972

'GSD succeeded in its artistic aims but tended to falter philosophically because of a core weakness—it depended for its continued growth on the chance mix of individuals to create a living culture. Sometimes this worked and sometimes it didn't.'(p70)

Figure 3. Founders of Graphic Studio Dublin 1960.

Printmaking was also enjoying a resurgence in North America, in Britain, France, Russia and Scandinavia and many new print studios were being set up, often with the assistance of generous

philanthropic donations. Hence GSD can be seen as part of a more widespread pattern on international development in fine-art printmaking. Many of the world's leading print studios were set up around this time. In the US: Pratt Contemporary Graphic Art Centre (1956), Tamarind Lithography Workshop (1960), Crown Point Press (1962) and Hollanders Workshop (1964). England saw the establishment of the Curwen Press (1958) and Scotland, Edinburgh Printmakers (1967). The seed funding of these various establishments tells its own story. In the US, big businesses were more established, and the germs of the concept destined to become corporate social responsibility were already visibly benefiting the arts. Pratt-Contemporaries received a donation of $50,000 from the Rockefeller family, while Tamarind received $135,000 from the Ford Motor Corporation. Figure 4 shows some of the printmaking techniques used in GSD.

Figure 4. A flavour of the work that takes place in the Graphic Studio Dublin.

However, raising money, especially for the Arts, in the cash-strapped Ireland of the 1960s, was a far trickier proposition. The Irish Export Board came forward with £120 and, while this was derisory when compared to US funding, in Ireland's low-wage and even lower-expectation economy, it was able to go a long way. However, one of the early successes of GSD was an imaginative business model they developed through which generous individual sponsors were encouraged to make a modest annual contribution in return for which they would receive as a gift a small portfolio of prints. This 'sponsors' portfolio' idea still persists to this day, some 50 years later. GSD became a thriving, successful, dynamic artistic community recognised by the Arts Council as part of the visual arts landscape in Ireland and recognised by artists as a commune where inexperienced and veteran printmakers; where master and pupil could work side by side.

Fast-forward, then, almost 50 years later. In 2007, experiencing growing pains and needing additional space to accommodate new equipment and to offer new, emerging printmaking techniques such as silk-screen, GSD now had its own CEO, its own Studio Director (a master-printmaker) and it had acquired its own gallery as a sales channel for artist members to both exhibit and sell their work. It decided to purchase new premises (see Figure 5) during the property boom in Ireland: a four-storey former granary close to the heart of the city on the northside of Dublin. To make the purchase, the organisation borrowed heavily. It had not owned premises before this one, it had been renting for the first 50 years, and the Board thought it was time to get a place they could consider home and call their own.

While the idea might have been laudable, the timing was catastrophic. It coincided with Ireland's first ever property 'bust', where property prices went into freefall, precipitating the deepest and longest recession in Ireland's history. The value of the property plummeted and the Board of GSD managed to negotiate a temporary 'interest only' payment arrangement on the property mortgage. However, the bank that owned the mortgage quickly sold it to a hard-nosed US vulture-fund who wanted to foreclose on the premises and to cast the artists out on the street. This would have left a generation of Irish printmakers without a place to work and without the facilities to make their art. The problems with the unsustainable mortgage were compounded by the fact that art purchases are among the first discretionary spends to get cut during a recession. People buy less art when their earnings are reduced, and hence, just when the organisation needed to show healthier revenues, its sales were drying up.

This is where the VUCA environment loomed threateningly over the enterprise, with few reasons for optimism and every avenue for revenue generation apparently drying up.
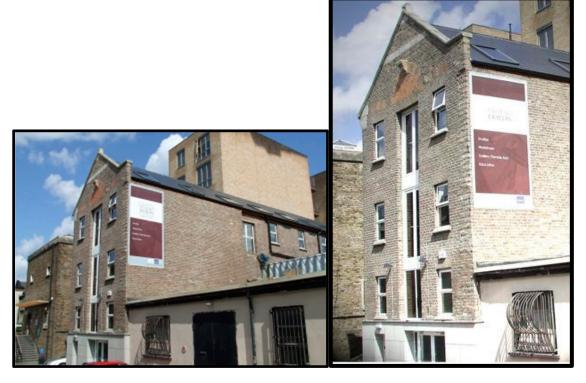

Figure 5. The four-storey converted granary, new printmaking studio for GSD.

Innovation in cultural organisations is considered generally to fall into one of four broad typologies [60,61]:

(1) Marketing Communications (i.e., the use of digital strategies, specifically targeting key segments more directly with better, sharper, more personalised propositions).

(2) Delivering the cultural experience in different or unconventional venues—like Shakespeare in Kew Gardens, for instance, or theatre in high street pubs.

(3) New Cultural Content—perhaps adding comedy with art or blending two or more art forms and extending both into a new realm.

(4) Operational Excellence—using conventional management practices and applying them to running the arts organisation and/or its events.

However, sometimes, these conventional approaches to innovation are unlikely to deliver the sort of turnaround performance that was needed in this VUCA environment.

A new Board of directors was empanelled in GSD to take up this daunting challenge and this is where the Art Thinking strategy took root. To save costs, the services of the CEO were dispensed with. The Board has nine members, of which the majority (5) are artists and the rest are volunteers, generally those interested in Art from the professions. In this instance, there is a chairman, a director of marketing and strategy (the author), a head of Legal (a bank property lawyer), and a head of finance (a chartered accountant in a large practice). The challenge for the new board was to restore GSD's finances to the extent to which it could afford to service the full payments on a mortgage—a reduced mortgage from the one originally taken out. This meant not only getting the business back into a healthier shape, it also required that the mortgage be renegotiated with, ideally, some debt forgiveness.

The situation was so dire that the Board really had to embrace the principles of Art Thinking: it did not seem to them as if it would be enough to plot a route from current position A to an incrementally

better position of A+. The Board just had to start with inventing a vision of what a desirable point B might look like in terms of revenues, audience numbers and costs. The Board decided to get all the artists on board to co-create a new, commercial strategy to pull the organisation back from the edge. Several artists (roughly 12) attended a Strategy Day in which a strategic North Star and set of guiding principles for the organisation were developed and several key effort priorities were agreed. The North Star was the organisation's guiding purpose and the effort priorities represented the key deliverables underpinning it. After that, the entire membership was invited to a brainstorming session which was run in a world-cafe format; roughly 40 members attended, which represented around 75% of members. The delegates were given a briefing on Art Thinking and given problem statements, such as: *wouldn't it be great if . . . , or how might we . . . ?* Each table had to work through the effort priorities and give them some dimensions and suggest revenue generating projects that, while being imaginative enough to be exciting needed to be capable of being actually implemented. The brainstorming session was professionally facilitated by a consultant.

Inviting artists into the business planning process was also an unconventional (and courageous) step as artists invariably have a strong vision and point of view and they rarely pander to an audience's tastes; rather they like to explore new territories and bring the audience on the journey with them. Nevertheless, this artist collaboration yielded a large amount of good and useable concepts, which the Board started to implement straight away. Many were great sales ideas. One prompted a themed artist-led and very profitable promotion called *100 by 100*, in which 100 members produced one piece (an etching or print) which had to be inspired by something in Ireland's National Botanical Gardens, and they each made 100 prints of it. This was themed *the Botanicals*, as Dublin's Botanical Gardens allowed the show to be exhibited there during their busy season, thus providing GSD not only with a new audience for original art but with a new exhibition venue.

Another initiative was the selection of a street graffiti artist (Dublin's equivalent of Banksy) to come and make a series of prints in GSD (see Figure 6). This was a groundbreaking partnership, the artist, Maser, was well known for urban street art, and was an iconic figure in the youth market with a cult following on social media. To get Maser to make a series of fine-art prints was quite a coup for the studio, and the prints he produced sold so well and so fast that they broke all prior records.

Figure 6. A sample fine art print by street artist Maser—leading to record sales in GSD.

Others were that some of the artists' larger works were showcased in pop-up retail stores in some of Dublin's busiest shopping thoroughfares, such as the Powerscourt Townhouse Shopping Centre. New markets, new spaces and new audiences were being opened up through this strategy, and the sales were really feeling a dramatic lift. In searching to open up new and larger markets for Irish printmaking, the sponsor's portfolio was revived, and sales were made to institutional buyers like Yale University, Oxford University and in Ireland to the National Gallery and Trinity College.

The organisation also strengthened its Business to Arts partnerships and forged a deal with one of Ireland's biggest law firms to produce an original piece of art to go to their 750 best clients. This was a high-ticket, prestigious and profitable programme, putting original art into the homes of hundreds of well-paid business executives. Figure 7 shows the classification and the range of innovation activity that was undertaken at this time for the organisation. A lot of the activity focused on bringing the work to the attention of new and different audiences, especially people to whom printmaking was relatively unknown. A counter-intuitive feature of this case is that when threatened with the harsh financial crisis, rather than drawing in their horns: cutting costs and commissioning less work, the Board chose to do the opposite. They elected to take a different approach, to ignore the bleak reality and, instead, to imagine a different and better reality for the organisation. They began with plotting a strategic 'north star' and navigated towards this desired outcome.
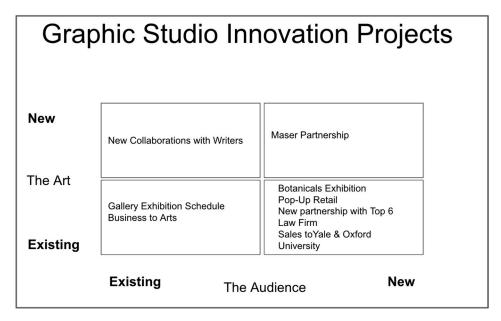

Figure 7. Classification of the Art Thinking projects developed and delivered by the Board.

4. Conclusions

The circumstances surrounding Graphic Studio Dublin did conform to the VUCA conditions. The future was uncertain; the twin engines of revenue were in freefall and the organisation faced an existential threat. Through this creative combination of developing new markets; developing better, more targeted marketing; getting new exhibition spaces; forging new partnerships, stretching across conventional disciplinary boundaries, little by little, the sales grew by over 100%. In addition, while all this activity was going on, the chairman was renegotiating down the debt with the vulture fund to the degree that they shaved off some of the outstanding balance because they could see GSD really pulling out all the stops to get the organisation back on its feet.

This is a valuable and possibly revelatory case of using Art Thinking in the Arts. Using Whitaker's [2] approach, there was:

- Clear designation of roles
- Placement of milestones or wayposts

- 　　'Sprint' scheduling of work over a relatively short period of time
- 　　Flexible facilitation from the Board rather than close management

Had GSD used Design Thinking to try to resolve its problems, it would have merely amplified its marketing effort and put the customer at the heart of the strategy and finessed their needs in an attempt to find some promising route to an underserved or unmet need. The range of experiments that were tried using this approach wouldn't have been as broad. It would have concentrated on doing what we do already, only better. A Design Thinking campaign would have used observation to focus on the GSD customer-journey. It would have honed in on pinch points in that customer experience map—such as the access or opening times of the gallery or the user experience of the website and started there—'doing what we do already, only doing it better'. Thus, design thinking alone would not have produced the dramatic results made necessary by the crisis facing the organisation.

Laissez faire management, or a more facilitative style of management was key to the success of this project. Whitaker [2] uses the metaphor of baking a soufflé in the oven. Of course, the chef is tempted to open the oven door and see how the soufflé is doing, but the mere act of observation causes the soufflé to collapse. Although there is a strong temptation to constantly check in on things to see how they're going, there are periods of time when management is better advised to resist that impulse. In managing this process, the quest of the Board was primarily for imaginative options and not for finished solutions and in this was several ideas were prototyped, tested and either canned or implemented.

Art Thinking is also more comfortable with the ambiguity inherent in the idea that the future is unknowable [61] for if it were otherwise an innovation would, in principle be already known and would have occurred in the present and not in the future. Popper [62] also notes that science is different and, in ways, much more straightforward. A scientist engaged in a piece of research, perhaps in physics, can attack their problem directly. They can go straight to the heart of the matter: to the heart, that is, of an organized structure. For a structure of scientific doctrines is already in existence; and with it, a generally accepted problem-situation. But, real world innovation problems do not generally have this helpful clarity about them.

This is the heartland of Art Thinking: when the boundaries are fuzzy and the outcomes uncertain. Madsbjerg [63] issues a passionate cry for humanistic, liberal arts thinking, believing like many others that over-reliance on data and algorithms creates enormous risks for employees, business and society. What all the data fails to capture, he says, is the critical nuances of culture and context that ultimately drive behaviour and lead the way to enduring innovation.

In summary, Art Thinking, with its focus on options, not outcomes; on possibilities, not certainty, was the ideal way to approach the very grave problems threatening the very existence of a core pillar in the Irish visual arts ecosystem. Art Thinking allowed the organisation not simply to plot a path from Point A to a more desirable Point B, but to collaboratively imagine or invent the ideal destination and to put in field a sufficient number of imaginative initiatives to get there. It seems highly appropriate to pilot Art Thinking in the visual arts and according to this case-study—it really does have something worthwhile to offer.

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