

Conversations with the Marketplace: An application of Design Thinking and Sociodrama Action Methods in an Innovation Workshop

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ABSTRACT

This paper describes the use of sociodrama action methods within a design thinking workshop created to support marketing planning for a new product innovation. Participants were a digital sector SME and researchers within a UK university knowledge transfer programme. The paper (1) discusses the theoretical foundations of design thinking and sociodrama; (2) presents a detailed case study of workshop co-development and delivery; and (3) reports the impacts for the client and the university. The authors assert that the discourse of design thinking enhances innovative, collaborative problem solving that improve exploration of possibilities for new product and service development as well as improved organizational business processes. Sociodrama methods assist facilitators by incorporating psychological, linguistic and biological elements to design thinking, leading to superior outcomes than simply from setting up a creative problem solving activity.

1. INTRODUCTION

This paper discusses the development of a Route-to-Market workshop that integrates principles and tools from the discipline of design, particularly “design thinking,” (DT) and from sociodrama/action methods (SAM). The paper reflects on the similarities and unique aspects that each domain brought to the task. We also reflect on the insights and learning gained, as well as the assessments, immediate results, and longer-term impact realised by the SME client. We aim to discuss elements that emerge as common ground between design thinking and sociodrama/action methods and what insights this pairing and synthesis may offer.

The action research context for this paper was that of experimentation with developing “design thinking” workshops as part of a European Regional Development Funded (ERDF) programme at a UK University. The work involved collaboration between two units in the university, an Art & Design Research Centre and a Business School. The researchers shared a conviction that “design thinking is the next competitive advantage” [1] based on reflections of their prior commercial sector experience. Their objectives were to deliver a workshop that addressed the client’s specific need but that also enabled the client to learn/assimilate new ideas that could be incorporated in their innovation culture.

The researchers designed a client intervention that combined elements of design thinking [6],[1] and sociodrama/action methods [2],[3]. The concept of design thinking (DT) came from work that explored designers’ unique approaches to problem solving [4],[5]. Additional work highlights the important role design methods offer for insight, new hypotheses and ideas to progress and survive organisational process on the way to implementation [6],[1]. The concept of DT is therefore grounded in a discourse of problem solving and innovation. But as Brown notes, a DT approach to innovation also depends on “empathy, integrative thinking, optimism, experimentalism, and collaboration” [6]. We view most published accounts of the application of DT as focusing on new problem solving approaches and less upon the social collaboration process and mechanisms involved in collaborations. In our own work to develop better innovation collaborations between University and regional businesses, we sought to address this through the integration of SAM into our DT engagements. SAM theory is grounded in psychology and sociology discourses and focuses on the roles that people embody and the systems in which they interact. An external consultant partner provided the SAM element.

1.1 Project Context

1.1.1 The Client

The client was a software firm comprising a founding team, six full time employees, and several non-exec business advisors. The company has been trading successfully for over seven years and has a reputation for high quality delivery and selecting only projects that stayed true to their core mission. The mission was that of advancing innovative use of social media for community building, particularly for the not-for-profit sector. They had previous exposure to 'design support' delivered through the prototype programme for the UK Design Council's Designing Demand initiative. This had resulted in a positive rebranding experience. As software developers, they were skilled and confident in their human-computer interaction research and design capabilities.

Their initial request to the University was for assistance with secondary market research as they considered taking a bespoke software project to a wider market following the system's completion and installation with the commissioning client. The future product would be unique along a number of dimensions and addressed several important unmet market needs. It could be viewed as a truly innovative offer.

For the University researchers, this was an interesting opportunity to see how design thinking might contribute to a stage in the innovation/ commercialisation cycle that was not a typical point of engagement but was arguably as important as technical or design wizardry necessary for the product development. The benefits of making the most effective marketing plans and investments would show up in cost of sales, product profitability, business growth and market share. They recognised that this was a more complex engagement than previous SME design thinking engagements and decided to look for an additional partner who was knowledgeable and experienced in design thinking philosophies, to support the development and delivery of the workshop. To deliver the workshops the team identified a facilitator who had worked on a range of previous multidisciplinary projects and who was trained in innovation coaching. Importantly the facilitator came from a background in applied theatre, with a specialty in sociodrama and was interested in the opportunity to collaborate on this project.

1.1.2 Action Research Project

The research team were attached to a three-year project entitled "Innovation Futures" that was co-funded by the European Regional Development Fund and the University. This project was a core part of the University's multidisciplinary knowledge transfer (KT) strategy. The Innovation Futures programme provided funding for approximately ten days of delivery for qualifying clients drawing academic resources from across five research centres within three separate faculties.

2. THEORETICAL FOUNDATIONS

The key theoretical feature of this paper and the intervention case study it reports is the linking of DT and SAM approaches. By implication this leads to an alternate approach to innovation support interventions. In their joint work the authors noted a "missing element" in the DT literature. Though there are many examples of DT interventions, DT takes an essentially cognitive approach to the issue of engendering innovation. The core of the methodology is that of applying a set of problem solving heuristics and sensibilities derived from the experience of undertaking design work in a variety of contexts. What is generally missing from this work is a view of how the actual intervention process will function socially and interactively to move participants to this mode of thinking and problem solving. The proposal here is that SAM provides a mechanism for planning these social interactions within the context of a design thinking intervention.

2.1 Design Thinking

The origin of the concept "design thinking" is closely associated with enquiry and reflection on different approaches to problem solving [4],[5]. A core piece of research behind the concept was conducted in 1972 by the psychologist, architect and design researcher Bryan Lawson. Lawson created an empirical study to understand the differences in problem solving between architecture students and post-graduate science students. This research furthered reflection around divergent vs. convergent thinking [7]. More recently Roger Martin re-introduced Charles Peirce's work, on the role of abductive logic, in his description of creative thinking and novel hypothesis generation. Abduction is inference generation from cases, in other words "grounded guessing" [8],[9]. He argues that this form of reasoning is common practice in creative practice, but has been subsumed by the deductive and

inferential logical modes underpinning the ‘scientific’ management theories of the industrial age. Martin makes the case that business needs to include design based abductive approaches (alongside inductive and deductive methods) in order to survive and thrive in the modern age [1]. Other writers present case studies of the power of such ‘design thinking’ for successful innovation in business [1],[10],[6],[11].

Elsewhere there have been calls to open up other domains to this or similar approaches. In the field of engineering, there have been calls for ‘integrated engineering curricula’ that cross the post-industrial arts and sciences divide and explicitly recognize the value of integrative thinking. The engineering approach, defined by Koen as “the strategy for causing the best change in a poorly understood situation within available resources,” links concepts and resources together “to create what has never been”. Given the integrative nature of engineering, Froyd argues: “The ability to make connections among seemingly disparate discoveries, events, and trends and to integrate them in ways that benefit the world community will be the hallmark of modern leaders. They must be skilled at synthesis as well as analysis, and they must be technologically astute.”

Innovation examples such as British Telecom’s network communication software modelled after ant colonies and the use of biologically motivated algorithms in distributed intelligence illustrate breakthroughs that come from multidisciplinary integration. But just as importantly, the integration of humanities subjects traditionally classed as a liberal arts curriculum are critical to the successful application of technology to solving complex social problems, such as energy, healthcare, and transportation, will requires change in human-centred life styles, social, political and economic systems.

Tim Brown, the CEO of IDEO, generally regarded as the world’s leading design strategy firm defines design thinking as: “A discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity” [6].

This definition can be seen to connect with human centred design philosophies as well as the integrated thinking arguments of Martin, Froyd, and Kuhn above. Brown and the IDEO founders, David and Tom Kelley, have promoted design thinking practice and philosophies. Several key concepts include:

- “insights are the fuel of innovation” - the more insights, the easier it is to be innovative.
- “ideas need to be materialised” - first for inspiration, then for evolution and ultimately for exploitation

They argue for a fundamentally different approach of iterative prototyping (‘build to think’) than the efficiency ethic that dominates most ‘scientific’ management approaches. Just as important in design thinking as borrowing conceptual design practices, is the cultivation of particular attitudes to problem solving. Brown lists key personality traits of design thinkers as empathy, integrative thinking, optimism, experimentalism, and drive for collaboration. It is worth noting in the discussion on this topic, that not all designers will be design thinkers, and that plenty of design thinkers are not designers. From this we draw some key conclusions:

- DT is an approach to problem solving
- DT implies collaborative team working and interaction
- DT argues for the importance of visualisation, prototyping and embodiment of ideas
- DT proponents imply a psychological (personality trait) model of successful DT practitioners

We would though note that the DT literature does not explore in detail how the relevant interaction is engendered. Additionally we would note that arguments based upon personality traits are essentialist and ignore the possibility of developing and learning new behavioral traits. We argue that SAM provides a route through which both the interactions and the development of behaviors (roles) can be developed and planned for in interventions.

2.2 Sociodrama and Action Methods

Sociodrama is a form of group exploration invented by leading social scientist, Jacob Levy Moreno (1889 – 1974), who was also the founder of psychodrama and a leading pioneer of group

psychotherapy. Moreno was also widely acknowledged as one of the lead innovators and founders of the discipline of social network analysis. This is the branch of sociology that deals with the quantitative evaluation of an individual's role in a group or community by analysis of the network of connections between them and others. Moreno described sociodrama simply as "a deep action method dealing with intergroup relations and collective ideologies" [3]. This broad definition left plenty of room for practitioners to define the boundaries and applications of sociodrama for themselves. Rollo Browne, an Australian practitioner describes it as: "... a learning method that creates deep understanding of the social systems that shape us individually and collectively." [6].

Certain principles underpin sociodramatic theory, one of which is applied role theory. These concern a relationship between the life roles people play and their ability to be spontaneous and creative, and an understanding of the systems that influence our behaviour through the roles we choose. Moreno believed that people play a variety of roles throughout their lives, which he called a 'role repertoire'. He postulated that the larger the person's role repertoire, the more spontaneous that person can be. Spontaneity, according to the theory, is an adequate response to a new situation or a new response to an old situation. The ability to be spontaneous prevents people being 'stuck' in personal and professional contexts. Spontaneity is distinguished from impulsivity or instinctive reaction in that it occurs with heightened awareness of context. It is not pre-planned and yet includes an element of responsible or adequate action. Spontaneity supports creativity and learning. It bypasses the world views that give rise to role and generates a new experience that then may be reflected on and expanded. Roles are not defined by Moreno as 'personality types' such as may be identified/defined by Belbin or Myers-Briggs type tests. Roles are social, historical, cultural personas (identities) that humans live in consciously or unconsciously. In response to a situation or as a vehicle for development (innovation), they may be named, re-interpreted and played with in order to bring about new understandings and possibilities.

2.3 Linking DT and SAM

In the case study described below we applied both DT and SAM ideas to the design of an intervention workshop for a client. The role of the SAM component was to provide a firm theoretical and practice framework for the interactions within the workshop. The DT component provided the focus and the context for the activity. Fundamental DT concepts, such as the importance of gaining customer insight and understanding the wider customer experience context, visualisation of ideas, and fast/low-resolution prototyping provided the backbone of the workshop teaching aims. The SAM discourse proposed new interactive and practical methods to support gaining empathy and customer insight, visualisation of information through various dialogue frameworks, and fast prototyping for the client's specific brief, their core marketing pitch. Initial discussions identified fundamental links between the two approaches (See Table 1). For example, both approaches have a core focus on empathy, but while designers will often research in a number of ways the wider context of a user experience, the sociodramatist will encourage people to step in another's role and describe the experience and point of view from that different role.

Table 1. DT and SAM – Points of linkage

Core Precepts	Design Thinking	Sociodrama/Action Methods
Empathy	Empathy / Customer centered	Empathy / Role Reversal
Visual Language	Sketching	Embodying or Enacting
Experimental Optimism	Prototyping	Testing through Enactment
Integrative thinking	Multidisciplinary teams	Social systems thinking
Collaboration	Collaboration; participatory design	Exploring role relationships & responsibilities; Spontaneity

Another similarity is that the practice of visualization is an important activity to facilitate discovery and creativity, in addition to supporting better communication. For design, drawing is a fundamental activity and skill assisting observation, reflection, and envisaging. Sociodrama likewise desires to create visualisation, but would typically ask the participants to embody or enact a concept, a conversation, or a possibility. The practice of prototyping in design, particularly the iterative process of making low-res prototypes as advocated in design thinking, mirrors methods that embody SAM ideas:

“let’s act this theory or idea out and see what else happens”. In both cases the artefacts made and the roles taken provide resources for the creative thinking in play. Design thinking always presumes multidisciplinary involvement in order to bring in different points of view, knowledge and expertise. Sociodrama presumes that all groups will be multidisciplinary (primarily because they would not anticipate that there are such things as single-discipline human beings), but will incorporate more tools for supporting group communication and understanding. Both discourses also presume collaboration for solution creation, but while design thinking would focus on sharing ‘designerly ways of working’ possibly referencing the creative studio, sociodrama would emphasise exploring role relationships in the creative ensemble or network.

The synthesis of the two approaches seemed to offer an expanded way for people to apply the shared core concepts and also learn/appropriate them in a deeper way. It seemed that SAM added in a new dimension of ‘visual’ language, by creating more dynamic scenarios of conversations than is a part of the DT discourse. The emphasis on physical movement, speaking and listening, adds a new three-dimensional element to design thinking embodiment. The physical set up of speculative, but ‘real’ conversations with customers/suppliers/the public created a form of low-resolution ‘prototyping’ particularly when the participants threw themselves into an imagined future describing the benefits of the new software product. A popular design thinking slogan, “Mocks not Docs!” meant to reinforce materialising, illustrating and investigating new concepts, putting off a rush to judgement via business case evaluation, took on new life when the ‘mock-up’ was a conversation between a user and organisation. SAM offers a framework in which this conversation can take place: a particular setting is chosen; roles are defined, assigned and enacted. Feedback is structured and begins from a position of positivity to determine what is meaningful and usable for the organisation before deciding what will be left behind. It is more than an activity; rather it is an experience that invites differing and unexpected perspectives as the system mapping of potential clients is expanded and explored through the specific action methods.

2.4 Application to Organisational Behaviour or Process Innovation

As referenced by Brown in his definition of design thinking, the three core determinants of innovation are: business (the competitive environment and internal capabilities); people (customers, stakeholders, and society); and technology (new material and engineering capabilities). As illustrated in the following diagram, each of these areas hold opportunities for innovation, as do the intersections of one or more of these fundamental activities. Innovations which take place in the intersections, and particularly the design innovation ‘sweet spot,’ are often the type of leaps forward that have significant and lasting impact, including the potential to change industry definitions, economics, and social behaviour, e.g. Apple’s iPod and iTunes creation.

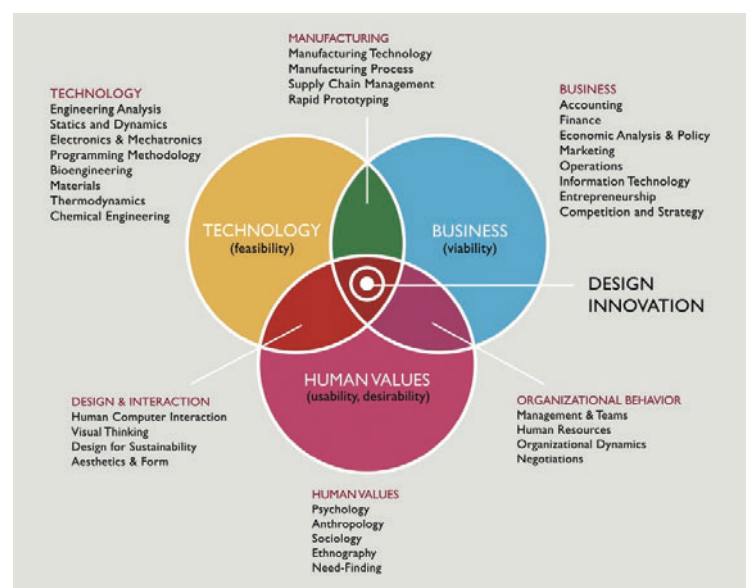


Figure 1, reproduction of design innovation diagram, Institute of Design at Stanford

In this case, the Route-to-Market question belonged primarily in the organisational behaviour overlap between Business and Human Values, however there were aspects that could be enhanced by use of technology, e.g. the client's ability to utilize social media for their guerrilla marketing, thereby offering potential for discovery in the design innovation sweet spot. As previously noted, the client's brief was relatively unique compared to most design and innovation workshops which would tend to focus on generation of new product or service concepts, often the intersection of new technology and human/customer 'needs.' Those workshops tended to emphasize customer insight and creative concept generation by borrowing design research, core practices and sensibilities. However for this client's brief, the core concepts shared by DT and SAM would have to be applied in a process of interrogating trends in the wider marketplace (the external environment), the potential customers/stakeholders (the target market), and the product to be presented and promoted.

3. CASE STUDY

3.1 Client Situation

The client organisation designs and builds bespoke web based software for social networking; their market focus is principally the voluntary and social action sectors. The client had produced a first version of an innovative software product for a charity organisation as part of a bespoke project and had subsequently produced a detailed prototype of a potential 'mass market' version. Their perceived need was to consider the most effective and efficient way to launch this potential new product to the marketplace. They wanted their marketing investment to yield high returns. Their time, as well as financial capital, was a scarce resource. The client approached Innovation Futures to help them explore the potential for this new product/service.

The client was initially interested in working with the University's Centre for Voluntary Sector Research (CVSR) to obtain secondary market research regarding the potential size of market for their product. During the diagnostic meeting, an Innovation Futures consultant assessed that a design-thinking workshop could be valuable to deepen their customer insight. A proposal with two components was offered but client was unsure about the potential value of the design workshop, so it was agreed to progress with the CVSR research and decide next steps subsequently.

The CVSR report provided a rough guide to the size of the market and various segments, however there was not enough detail regarding the IT environments and patterns of usage to satisfy the client's needs. In discussing next steps, the IF consultants re-pitched the design thinking workshop emphasizing design as a set of solution finding methodologies (rather than as product or HCI design) and that it could be applied to a business process such as "route-to-market" planning. The client was enthused with this clarification and accepted a new proposal.

3.2 Workshop Development

While confident of positive outcomes, the IF researchers appreciated that this "business process as design object" focus was substantially new ground, more complex than previous applications delivered by themselves or described in literature. The team thought it prudent to consider additional support for group communication and working given the application of design thinking to a non-tangible process and potential difficulties in translation. One of the researchers was aware of experimental applications of SAM within multidisciplinary research and innovation workshops. Following consultation with a local practitioner, a joint project team was formed to incorporate SAM principles and structures within the DT workshop for this particular client. For the client, the workshop had only one clear objective: to create a route-to-market (RTM) strategy and initial action plan for the potential new product, but they were willing to accept this experimental methodology with some interest given their proficiency in software design.

The following table illustrates the workshop topics that were selected as key to accomplishing the route-to-market planning objective: Preparation; The Marketplace; A Target Market; The Product/Service; and RTM Planning. These key elements are shown linked to specific workshop activities referencing the DT/SAM concepts that were employed in the methodology and were also being taught or transferred to the client. The practitioners used DT concepts as the cognitive base for the topics and selected the SAM techniques serving as methods for activating that thinking.

Table 2. Workshop activities linked to DT and SAM concepts

Key Workshop Topics	Workshop Agenda	Core DT/SAM Concepts Embodied
Preparation	Product prototype presentation; Pre-workshop research: market overview report; competitor overview analysis	Warm-up (SAM)
The Marketplace	External environment mapping	Visualisation (DT); Multidisciplinary collaboration (DT); Social systems thinking (SAM)
A Target Market	Customer Interviews	Empathy (DT); Role reversal (SAM)
	Network Roundtable Discussion	Collaboration (DT); Exploring role perspectives (SAM)
The New Product/Service	Co-Star analysis Pitch session	Prototyping (DT); Testing through enactment (SAM)
RTM Planning	Multi-team planning mapped to route-to-market journey	Visualisation (DT); social systems thinking (SAM)

The workshop Preparation was important not only from the standpoint that some information would need to be collected prior to the day in order to accomplish as much as was hoped during the workshop, but also to “warm-up” the group for the day’s work much like athletes warm up before a game or actors before a performance. Three elements formed the Preparation content. Firstly, the client made a visual presentation of the product prototype. This visual communication was fundamental to ensuring shared understanding of their concepts within the team. Secondly, a competitor overview was conducted by the IF researchers, one of whom had prior business experience in the area. The competitor information was circulated amongst the research group and clients for review and additional contributions about ten days before the workshop date. It remained an artefact of open conversation amongst all parties, rather than a (finished) report that had been created by university researchers and delivered to the client for their review.

Going to market is an entry into a system of users, suppliers, competitors, and other agents (The Marketplace) and therefore the day would start with an exercise to visualise and better understand the External Environment. This exercise is not dissimilar to SWOT or PEST analyses conducted in many strategy or marketing workshops, but it was modified in two unique ways. Firstly, visual representations of key organisations within the marketplace categories (Technology, Competitors, Government/Regulation, Clients/Customers/Users, and Social/Environment/Economic) were used to make the categories more ‘human’. Secondly, participants wrote their observations about trends and implications thereof in each of the categories relative to their company, marketplace, and new product potential on post-it notes, and placed them on the map while briefly stating the content.

The next focus was on the Customer as a method to look in depth at the likely target market. This work involved two exercises: the Customer Interview and the Network Roundtable Discussion. In the first, the dramatic prop of ‘the empty chair’ was used and participants were invited to take the role of the Customer sitting in the chair with the rest of the group in a semi-circle in front of them. The group used the format of an interview conversation with the client regarding their usage practices, preferences, needs and wants in the domain relevant to the product. Following this, the group adjourned to a roundtable in which each participant adopted a role of an organisation from the external environment map to describe how they had benefited from the product implementation by the client one year previously; each person was speaking speculatively about this experience of course. This exercise brought to life the experience of listening to multiple stakeholders and also enabled a variety of experience-based intelligence within the diverse participants to contribute outside their known ‘specialist’ role. As the product was aimed at mid-size charities, it was likely that most participants would have some experience with a charity either as volunteers, fundraisers, consultants, employees, or service recipients. This allowed the company to gain a better understanding of their customer’s needs and also their customer’s customer or beneficiary’s needs.

Following this activity, the next focus would be on the Product and making a prototype marketing pitch. We would use the CO-STAR Value Proposition Template [12] followed by a Pitch Session that would include the attendance of additional ‘critical friends’ agreed with the client. The CO-STAR tool is used to help users craft a compelling value proposition and iterate it effectively with others to help it become a market-worthy venture. The CO-STAR framework offers six questions to craft a marketing

pitch: who are the intended Customers and what are their unmet needs?; what is the full potential of the Opportunity?; what is the proposed Solution for capturing the opportunity and satisfying a customer?; who needs to be on the Team to ensure the solution's success?; what is your competitive Advantage over the alternatives?; What Results will be achieved from your solution? The Pitch session would be structured with a 5-7 minute pitch by the client team to the group followed with structured feedback. This feedback session incorporated the use of three different roles for contributing feedback: a Fan (someone who only spoke about what they loved in the presentation); a Builder (someone who wanted to offer something to build on the ideas presented); and a Customer/Investor (someone who wanted to question or challenge some of the pitch). These roles were signified with physical artefacts (a heart, a hammer, a currency note) held by the person responsible for the role. An open feedback session would follow the structured feedback so that all participants would be heard from. The additional 'critical friends' invited to the Pitch session included a marketing strategist also working with the client, a creative consultant, and two potential customers/investors known to the client.

Following the Pitch prototype, participants would turn to planning the route-to-market actions against a timeframe of their imagining. Two sub-groups would be formed in order to accommodate discussion in the short timeframe as well as support generating the most thinking on the question. A wall sized visual illustration of the client taking their product to market, with customers and competitors milling about promotion hawkers, flyers, stands, games, demonstrations and invitations to try all taking place would be used to help the task be more 'real' and not link to 'textbook' marketing planning frameworks.

4. RESULTS

4.1 Client Assessments

The workshop was very highly rated by all client participants, receiving an unusual 10 out of 10 rating from both principals. Others participants also evaluated it quite positively with an average rating of 8.5 and general discussion signified a very positive outcome. The most valuable elements appeared to be the customer and network role-plays, the Pitch prototype & feedback, and the action planning exercises.

The client's key perceptions were that they had gained a much greater appreciation of their potential customers' needs and opportunities for benefits that would be involved in potential purchase decisions, implementation and evaluation. They had particularly valued the speculative conversations that made explicit various or knowledge gaps that were guiding their marketing planning assumptions. The workshop demonstrated that we successfully developed a methodology that helps the exploration of a wide variety of ties and their relationships for developing a marketing strategy and plan. The client was also enthused about a new customer benefit that had been uncovered that they believed could be easily supported with a manageable level of new software development. This new insight could enhance product differentiation and competitive advantage.

The Pitch prototype exercise produced a half dozen specific recommendations that the client could work on. They discussed the discomfort of having to rapidly prepare and deliver a marketing pitch but realised the significant value they had gained from doing so, and could also reflect on the value of fast prototyping and testing iterations for marketing messages not only for product design. One year on, the client reports that one of the most helpful consequences of the work was that it strengthened their innovation capabilities, particularly their practices to help them "fail early and often" which they use to describe an enhanced research, prototyping and testing process they now use. They have done this by continuing to use some of the role taking and prototyping learning from the workshop as well as applying ideas from several books about new innovation practices in their industry that they read subsequently. They described their follow through of the action planning from the workshop as very helpful and ultimately led them to conclude that taking the product concept to market was more complex than they were ready for. The process however has strengthened their innovation culture and they were in the midst of similarly advancing several new ideas through research and market testing.

They cited the 'role plays' [client language; the workshop exercises had specifically avoided using this term] as particularly novel and valuable learning points. They described how they came to realise how much about the target market they had not understood and how the workshop brought that about via an experience that helped them validate. There was observation about the workshop approaches versus 'focus group' approaches which would not have delivered as much insight and motivation for action. The researchers reflected on the role and system differences between focus groups and the conversations/feedback structures in the workshop. In focus groups the power resides in which

questions are put to the focus group; in other words it is very easy for the client to focus and frame what they (want) to hear from focus group participants. In the conversation/feedback sessions, the power resides in the client voices reflecting their perceptions and often incorporating unexpected perspectives.

A further result is that the client is now considering offering a similar workshop as part of their development service for certain new clients. They see some clients as having such strong assumptions, and convictions that they know what is needed, that an experiential session such as the workshop would be a valuable time/effort saver for all parties. This possibility is currently being explored by the IF team with the client.

The element of the workshop that did not work as well as expected was the visual RTM map that was meant to act as a stimulus for action planning. In a moment of spontaneity, the practitioners asked the clients to create a useful way of feeding back a vision of that marketplace journey. The facilitator then created this visual map with their input. The resulting picture and timeline was much clearer to the client and created a pathway towards their goal that linked to trigger elements that they had experienced in the workshop, which supported their plan execution in the months ahead.

4.2 Innovation Research Team

The workshop also produced results for the University's innovation research team in three categories:

- a model for multidisciplinary collaboration
- a model for co-development between HEIs and SMEs, and
- impact on HEI KT practices

The model for multidisciplinary collaboration could very roughly be described as supporting the intellectual framework of one discipline (DT) with process knowledge from another (SAM). This is a gross over simplification but is it an accurate reflection of the initial contract for engagement between the University researchers and the external SAM practitioner. All parties agreed to read three key pieces from each discipline as provided by the partner and several reflection sessions were held that identified common ground and explored unique elements. The organisation of the workshop framework (Market, Target Market, Product, Action Planning) arose from previous commercial experience of several team members. Once the content framework was established, and the investment in learning and exploration of key points in the new disciplines had been made, the team could design workshop activities that would achieve the content brief (a RTM plan) and the learning objectives.

As the development and delivery of the workshop involved an external consultant, the need to devise a model for co-development was inherent in the project. Aside from the collaborative nature of the workshop development, described to some extent above, the team consulted a university advisor on best approaches for intellectual property holding and commercialisation. The model that was put forth embraced shared copyright with unlimited rights for further development under each brand, and an agreement to meet to share further developments and findings. Each partner could use a specific element developed in future work but recognise a shared copyright. Each party was free to modify any of the prior work, but those modifications would be represented solely within the modifying organisation's brand. This enabled full freedom for future commercial benefit, which included marketplace feedback. The benefits of that subsequent development would be shared with the full team knowing that unique efforts would be protected by individual brand copyright but that the knowledge sharing would likely give rise to new collaboration, and research possibilities. It was recognised that by exploring this approach, the University was able to participate with two SMEs as an innovation partner - their original client as well as the SAM practitioner. A proposal for further co-development of four innovation workshops was made linking in additional University and external resources, which would have the same knowledge exchange as well as leveraged SME assistance effects.

A further impact was realised within the Innovation Futures programme and staff group as the success of the workshop generated interest from several groups of stakeholders in the University. For the Innovation Futures group who regularly structured bespoke engagements, the workshop provided a supportive model on how incorporating some social systems theory and practice could help working with diverse business teams/clients. The gap between 'content' (technology) and 'process' (communication and social issues) did not seem as wide. Importantly, the focus had been on experimenting with something that seemed useful and did not require a significant debate on new 'universal truths.' Additionally, a design services unit within the University was prompted to innovate

a more holistic design review offer than they had previously considered. They were also prompted to involve external disciplines, non-designers as part of the process.

4.3 Implications and Recommendations

We would argue that linking DT and SAM provides a basis for planning and delivering DT interventions. Importantly SAM provides a methodological and theoretical basis for planning both the interactions and the roles to be explored in the intervention. SAM also provides a basis for expanding the repertoire of “prototyping” activity to that of users and users reactions to design, process and product ideas.

SAM has the potential to be used more widely in the areas of Design and Innovation. Mapping out the system and expanding it enables organisations and businesses to create processes through which they can identify and meet their clients’ needs. Role taking and engaging in feedback, analysis and dialogue connects the organisation to the service user/customer/client in a meaningful and beneficial way.

The implications of our work are important to design and business management academics interested in further research on applications of ‘design thinking’ to a variety of innovation processes and cross-sector/discipline collaboration. While design thinking embraces multidisciplinary team working, there is usually the challenge of finding common ground and shared language. The SAM discourse offers the field of design a different, but complementary, theoretical and practice foundation that may assist that need. This may represent a new interdisciplinary framework relevant to the study of innovation as well as a fresh approach to HEI knowledge transfer/exchange practice, particularly for projects going beyond new (product) concept ideation and seeking to innovate core management and innovation capabilities and culture.

The value of good design, as an attribute of products and service systems, as well as a process that informs core management responsibilities and organisational culture, is increasingly recognised as a source of competitive advantage. Participatory design philosophies and methods are of increasing interest to researchers and practitioners particularly in dealing with complex problems, to help ensure that solutions fit well with a wide variety of stakeholder needs. Facilitation tools developed from the domain of SAM demonstrate high impact in tackling complex organisational teams, change, and problem solving. Our experience suggests that there are many further insights and subsequent practice development that could come from further research in complementary methods and synthesis of ideas from the two domains.

We believe areas for further research include:

- new applications to innovation and business process as well as cross-sector/discipline collaborations, particularly within the university
- exploring shared language for multidisciplinary team working, applications in business as well as in HEI KT/KE practice
- new interdisciplinary framework for study of innovation
- applications to participatory design approaches and methods

6. CONCLUSION

Participants rated the workshop outcomes and process very highly. One year on, they report that a lasting impact of the work has been their enhanced ability to “fail early, fail often.” They experience this accelerated cycle of idea testing as a more positive culture for innovation, and new product, development, rather than as a “test for success or failure”. They are also considering the possibility of incorporating this type of workshop in certain new client engagements where they believe the client has strongly held opinions, but possibly incomplete understanding of their users or customers.

The success of the intervention obviously provides a base for further innovation intervention development but also defines a new research agenda for DT. The discourse of DT tends to highlight the importance of innovative collaborative problem solving methods. As such it has a potential to appear to focus on cognitive or social-cognitive elements of the participants and group working. The SAM elements assist facilitators to incorporate additional psychological, linguistic and biological elements to the reflective creative practice insights of DT, so that superior outcomes should not be assumed simply from setting up a more creative problem-solving context. Innovative ideas also face many obstacles on the pathway to implementation; both DT and SAM offer insights and practice recommendations from

their philosophies to address these factors that should also be further explored. Further research will include detailed analyses of conversation interactions in additional applications of this joint approach. These analyses will provide examples of the fine-grained dialogic processes in action during DT interventions and highlight the specifics of the application of SAM.

The clear implication of the success of the case study is that SAM can be successfully integrated into participatory design and innovation methods. SAM appears to be philosophically harmonious with the discourse behind DT, as well as able to support and augment DT interventions. We would argue that SAM has the potential to be used more widely in the areas of Design and Innovation linking visual and linguistic ways of working and creating in new and useful ways.

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