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## **Design Innovation for Creative Growth: modelling relational exchange to support and evaluate creative enterprise in the Scottish Highlands and Islands**

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## **Design Innovation for Creative Growth: modelling relational exchange to support and evaluate creative enterprise in the Scottish Highlands and Islands**

### **Abstract**

This article examines the development and delivery of a Creative Growth Model as part of a programme of Design Innovation activities with creative micro-enterprises and support organizations in the Highlands and Islands region of Scotland. There is a growing body of critique for how creative enterprise is framed, supported and evaluated in relation to economic notions of value and growth that struggle to incorporate the socio-cultural interests and activities of sole traders and micro-enterprises. This article presents a Design Innovation approach for identifying situated conceptions of value, modeled as emergent value constellations, based on the diverse interactions and relational exchanges prevalent within creative enterprise.

This research draws predominantly on the work of Design Innovation for New Growth (DING), a two-year AHRC follow-on funded project between 2017 and 2019, which engaged with existing creative expertise in the Highlands and Northern Isles of Scotland to mobilise local practitioners as central drivers of innovation. The paper aims to contribute to co-design literature seeking to develop ‘design practices that understand how value is co-produced, [...] understood, generated, and employed’ (Whitham et al. 2019: 2) in conjunction with creative enterprise.

*Keywords: Design Innovation, creative economy, relational exchange, value constellation, creative micro-enterprises.*

## Introduction

In the UK Industrial Strategy: Creative Industries Sector Deal (2018), the creative industries, reported by Sir Peter Bazalgette (2017: 9) as growing twice the rate of the UK economy, are positioned as ‘at the heart of the UK’s competitive advantage and [...] represent a major strategic opportunity.’ The transformational influence and potential of digital technologies, along with disruptive business models sweeping away previous incumbents, has created a demand for continuous innovation as the normative mode of operation across multiple sectors. This has cast the creative industries in a stark light as playing a vital role in providing sustainable innovation and economic growth. As such, policy agendas have been particularly concentrated on regional cluster development within urban centers and focus on processes of commercial exploitation such as IP management, high-growth digital innovation and financial risk (British Council 2010; Bazalgette 2017). Such purposeful narrowing of strategic scope is argued here to partly overlook the interests and activities of a major proportion of creative practitioners and enterprises within the sector. There has also been significant critique of the lack of space and opportunity that this focus leaves for exploring the social and cultural value of creative enterprise to society (O’Connor 2016; Bakhshi and Cunningham 2016; Garnham 2005). This article aligns with critiques of innovation discourses that are enthusiastically adopted to proffer economic value creation. In response, the case presented seeks to develop a more considered discourse *with* creative enterprise to better account for the situational and emergent contradictions in value that can be encountered.

This article draws on data captured from the £250k project Design Innovation for New Growth (DING) - AH/P013325/1. DING is a two year follow-on project funded by the Arts and Humanities Research Council (AHRC) delivering Design Innovation as a strategy for growth in the creative economy of the Highlands and Islands between January 2017 - January 2019. DING built upon knowledge and approaches generated from the AHRC-funded Knowledge Exchange (KE) Hub Design in Action (DiA) - AH/J005126/1. The aims for the Hubs articulated by the AHRC was to engage both with the challenges of co-production and community engagement, and the challenge of developing commercial applications of arts and humanities research in the creative sector (Moreton 2016). The four hubs differed in how they addressed this dual challenge, with DiA explicitly engaging the discipline of design ‘as a strategy for economic growth and innovation,’ choosing to focus on new business creation and testing ‘the value of design-led innovation across fields of knowledge, business boundaries, technology and current policy’ (DiA 2016: 5).

The Preliminary Report on the Achievements of the AHRC KE Hubs (Senior et al, 2016) found each region demonstrated their capacity to identify the strengths of their creative cluster and deploy tailored knowledge exchange models to capitalise on the opportunities they offer. However, there remained a focus on the economic value creation outputs of the Hubs, with such evaluation of KE projects offering limited insight on the processes that achieved these figures, nor the experiences and capacity gained by those involved. As Kitagawa and Lightowler (2013: 12) assert, ‘an inherent and unresolved problem...is the difficulty of systemically capturing broader “socially” and/or “non-transaction” orientated KE activities with appropriate metrics and indicators’. There is broad acknowledgement of the role of relationships to effective KE and innovation, but as the Dowling Review explains, ‘there is more to be

done to help existing efforts evolve from short-term, project-based collaborations to longer-term partnerships focused on use-inspired research' (BIS 2015: 5).

The purpose of DING, as follow-on funding, was to examine and support processes of innovation with new audiences in a rural Scottish context of creative enterprise. The Highlands & Islands region of Scotland faces particular challenges that exacerbate fragmentation in its creative sector. Work undertaken by the Highlands & Islands Enterprise body cited low levels of entrepreneurialism, start-ups and innovation, dispersed working communities and a lack of technological infrastructure (HIE 2013). The heterogeneity of the different regions in Scotland has also been argued to make universal policy recommendations to be problematic (Ross, Admas and Crossan 2015 and Mason et al. 2015). A narrow economic growth agenda simply does not fit the Scottish Highlands and Islands creative economy, thus placing contrasting demands on the role of innovation in the region. Encouragingly, aspects of Creative Scotland's Creative Industries Strategy (2016) attempts to acknowledge the social and cultural impact of creative industries in addition to its economic impact, while Scotland's creative economy is recognized as a growing sector dominated by sole-practitioners, micro-businesses and small companies (CEO 2014). However, there remain key gaps and challenges in how to evidence, evaluate and facilitate such impacts in balance with economic impacts. The risks involved in new business formation are often high, with a high proportion of creative entrepreneurs taking on a diverse portfolio of freelance and sole trader work, which can render much of their activity invisible to statistical research. For creative practitioners, there is a skills and support gap in balancing or connecting entrepreneurial activities with the needs and value of their developing practice.

The connection being drawn in this study between Design Innovation, growth and creative enterprise is that a number of DiA and DING project outputs were concerned with the transition from conceptualization and innovation to business operation as a fragile point in the development process. As such, these projects explored how design approaches could objectify, articulate and challenge assumptions in such processes. This article focuses on the development and application of a Creative Growth Model as part of a Design Innovation approach for identifying more qualitative forms of growth with creative micro-enterprises. We do this by firstly examining Design Innovation's potential role in understanding value, before presenting the development of methodological research produced through DiA that informed the development of a Creative Growth Model based on relational mapping. We then examine the Model's delivery as part of a series of Design Innovation interventions aimed at mapping, connecting, supporting and evaluating creative enterprise and support organizations in the Highlands and Islands of Scotland. This is reviewed using the Model's four qualitative growth criteria on data collected across the project to extract insights on how effectively such a Model and approach captured articulations of value, and frames creative growth.

### **The role of Design Innovation in understanding value**

Design practices now encompass innovation-driven cultures (Neumeier 2009; Brown 2009) and democratic, participatory approaches (Sanders and Stappers 2008; Binder et al. 2011) that engage with increasingly complex interdisciplinary situations. Design is becoming 'a more integrated activity involving collaboration among many different professions' (Cross 2011: 91). As Thackara observes, 'complex systems are shaped

by all the people who use them, and in this new era of collaborative innovation, designers are having to evolve from being the individual authors of objects, or buildings, to being the facilitators of change among large groups of people' (Thackara 2005: 7). This still emerging notion of Design Innovation incorporates an expanding array of design practices, tools, ethnographic techniques, co-design approaches, design games, conceptual modeling, prototyping and visualization. Such *design artifacts* are presented by Binder et al. (2011) as constitutive of the 'object of design', or *design Thing*. For design artifacts to have value and significance, they have to become part of the living experience of human beings in the way these afford, invite, and oblige interactions (Binder et al. 2011: 59). Through design artifacts, design is proposed to be engaging on two fronts: envisioning what the design Thing should be, and playing with the socio-material things constituting it (Binder et al. 2012). Design is thus presented as a social act of 'drawing things together'; a framing of design competence, influenced by Bruno Latour's 'challenge to make public the design thing', as that which 'permits the heterogeneity of perspectives and actors to engage in alignments of their conflicting objects of design' (Binder et al. 2012: 25).

In contexts of user participation, this framing of design competence emerges through the ability to objectify, articulate and challenge assumptions in the design process. The expectation for designers is to acquire communication and facilitation skills in order to demonstrate and share how such methods can shape innovation and new ways of working. The sustainability and preferability of such change depends, in part, on the collaborative approaches deployed through Design Innovation to evidence and enact them. Within this paper's aim of identifying more qualitative forms of growth, the design process being articulated and challenged is that of creative micro-enterprise development.

One of the key challenges for DiA was how to innovate support services, particularly cultures of IP protection and KE environments, to better account for the flexible working practices and interests of creative enterprise (DiA 2016). A CoDesign journal special issue (2019) reflects on the impacts from the KE Hubs by promoting 'a conversation about how alternative ways of understanding value can be foregrounded in collaborative design research practice' (Whitham et al. 2019: 2). The journal's editorial identifies problems in how governance structures can 'construct, rather than reflect, the landscape they describe' (Whitham et al. 2019: 2). As such, the article identifies critiques of evaluation approaches focused on outcomes, overlooking process (Upton, Vallance and Goddard 2014) and individual creative development (Crossick and Kaszynska 2016). The Creative Growth Model and Design Innovation approach presented in this article is proposed to complement and build on recommendations to examine the practices of valuation, pragmatically framed by Helgesson and Muniesa (2013) and Kornberger et al. (2015), through 'the situated understandings and activities that serve to make things valuable to individuals and groups' (Whitham et al. 2019: 2). The aim of such an approach is acknowledged across a range of co-design literature as 'developing design practices that understand how value is co-produced [...] understood, generated, and employed in design situations' (Whitham et al. 2019: 2).

### **Identifying value through networks of relational exchanges**

Particular approaches to conceiving and capturing value that have influenced this article focus on studying the effects and behaviors traced across a network or

ecosystem of actors and relations. Dovey et al. (2016) review a network analysis of the REACT KE Hub by developing on the concept of a ‘practice of cultural ecology,’ which Ann Markusen et al. describe as ‘the complex interdependencies that shape the demand for and production of arts and cultural offerings’ (2011: 8). This draws on studies of the benefits of clustering for economic growth (Van de Borgh, Clodt and Romme 2012) and ideas towards value constellations (Normann and Ramirez 1993; Escalante, 2019), which understands value as an emergent property co-produced by any agents in a network rather than being created and consumed in a linear value chain (Escalante, 2019). Dovey et al. stress ‘the importance of the co-ordinating agent of any value constellation,’ as they are invariably ‘designed and curated,’ while recognising the challenge for constituent creative enterprises being ‘able to identify and understand their position and impact’ within networks of creative production (2016: 12).

When considering a more networked conception of value beyond economic outputs, this paper seeks to develop upon notions of *relational exchange* from Social Exchange Theory (SET), particularly the variables by which it is framed. SET acknowledges that, in business-to-business relationships, exchange interactions involve economic *and* social outcomes. Managing such relationships includes the production of relational exchange norms or practices (Lambe, Wittmann and Spekman 2001: 5-6). Such norms are recognised as ‘formal and informal mechanisms [...] working together to regulate interaction’ among business relationships. Of particular significance is the identification of *informal* interactions, where ‘the contract to the exchange becomes more relational as exchange contingencies and duties become less codifiable’ (Lambe, Wittmann and Spekman 2008: 6). At the creative micro-enterprise level examined in this paper, informal mechanisms (such as sharing work, advice and ideas) are argued to be much more prevalent compared to formal mechanisms (such as contracting work, IP and studio overheads) prevalent in creative economic policy. Through Day (1995: 299) Lambe et al. (2008) propose exploring ‘relational exchange competence’ as enterprises with ‘a deep base of experience’ that have ‘well-honed abilities in *selecting* and negotiating with potential partners.’ This includes ensuring ‘roles and responsibilities are clear-cut’ within relationships and ‘continually reviewing the fit of the [relationship] to the changing environment.’ This is where a SET concept of relational exchange and this paper’s adaptation for creative micro-enterprise diverge, as such core competencies are not seen as wholly contained within individual micro-enterprises, but more distributed among a network of relations and actors.

SET provides key indicators from an economic perspective on relational exchange that is argued to offer a useful comparator for more situated conceptions of value within relationships of creative enterprise and potentially concur with Dovey et al. to ‘shift the frame for the evaluation of a creative enterprise sector from ‘high growth start up’ to ‘sustainable network’ (2016: 5). The Creative Growth Model and Design Innovation approach examined in this paper goes some way towards capturing such indicators of relational exchange and asks how they might capture and foster situated conceptions of value within the network of relationships encountered.

### **Developing a Model for Creative Growth**

The Creative Growth Model was adapted from theoretically informed research building on the lead author’s AHRC-funded PhD thesis, supported through DiA. The



thesis developed an *actor-network mapping* methodology (Johnson 2016) to trace and analyze multidisciplinary design work. Actor-network mapping uses a four-step research frame from actor-network theory (ANT) for assembling and describing actor-networks through observation and interviews: *interest*, *enrolment*, *points of passage*, and *trials of strength* (Callon 1984; Akrich 1992). The main tenet in ANT is ‘that actors themselves make everything, including their own frames, their own theories, their own contexts, their own metaphysics, even their own ontologies’ (Latour 2005: 150). The ANT frame was adapted to visually map *design artifacts*, constitutive of the ‘object of design’, or *design Thing*, within the relationships of interdisciplinary work performed. Actor-network mapping would then undergo situational analysis (Clarke 2006) to interpret the key ‘matters of concern’ (Latour 2005) design artifacts represented within the design situation. Together, these methods constituted an ‘object-oriented approach’ that was used to capture the role of design in cases of new business development supported through DiA (Johnson et al. 2016a and 2016b).

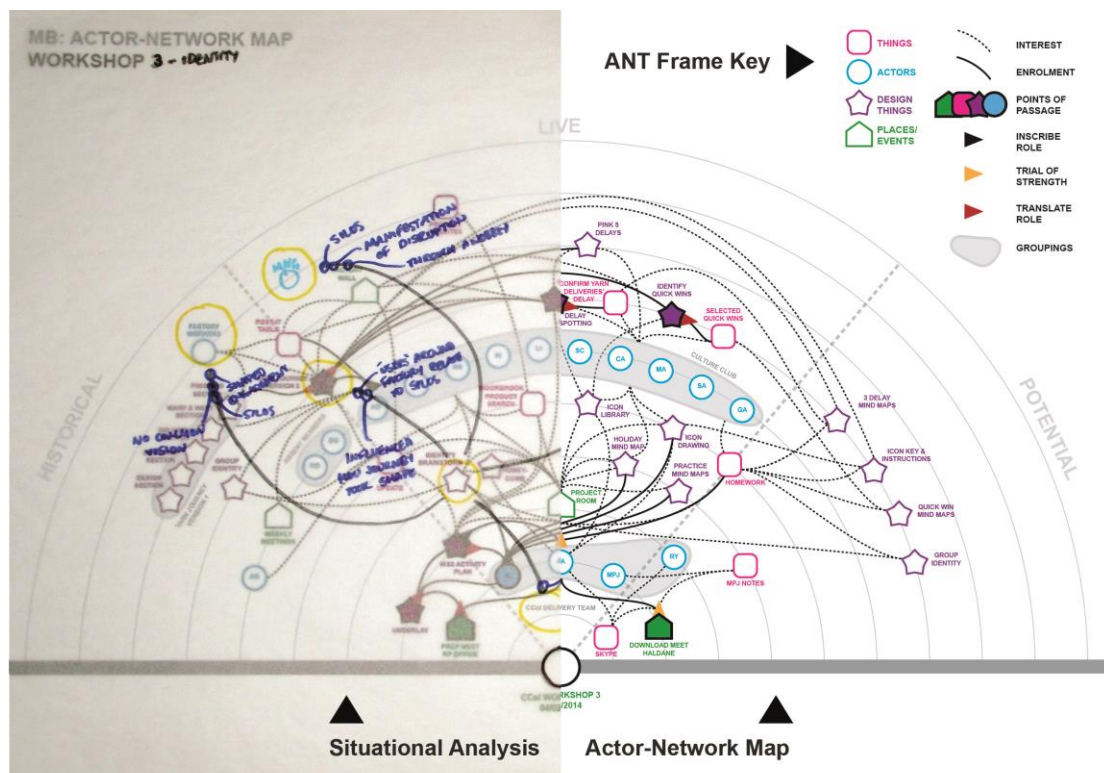


Figure 1: Actor-network mapping using ANT frame (right) and overlaid situational analysis (left), (Johnson 2016)

The Creative Growth Model (see figure 2) built on the methodological and contextual learnings generated from DiA research by developing a relational model based on elements of actor-network mapping. Firstly, two distinctive dimensions of relational exchange were proposed: a progressive dimension and a lateral dimension (Johnson et al. 2016b: 22). Within the Model, the progressive dimension (enrolment and points of passage) is represented through mapping both *live* (or enrolled) *actors*, around a creative growth innovation challenge toward its center, and *potential actors* towards the outer edge. The lateral dimension (interest and trials of strength) is represented through a circularity of potential interests and influences, which can be distinguished

by the positions of any actors mapped and drawn as distinct relations. Secondly, actor-network mapping cases of business development were incorporated within a review of the wider DiA programme to propose relational themes, or drivers, of value creation through design (Johnson et al. 2016a: 22-25). Within the Model, reflecting on these themes informed the framing of four distinctive perspectives proposed to account for the diverse interests around creative enterprise – *economic*, *cultural*, *social* and *practice*. Economic interest is positioned opposite social interest to separate the articulation of relational exchanges that provide economic and social outcomes, the transitions between which have been argued to constitute a major gap in skills and support for creative enterprise. Cultural interest is positioned opposite interests in developing practice to separate the identification of collective, external interests of value exchange from more individual, internal skills development or unit value creation. With each axis representing the transition from potential actors or action towards live actors in the growth and development of creative enterprise, trajectories for growth are framed and explored across relations assembled within each quadrant:

Network Growth - new and enhanced connections and communities of practice

Knowledge Growth - new and enhanced forms of practice

Value Growth - new and enhanced products, services, experiences and models

Market Growth - new and enhanced audiences and communication



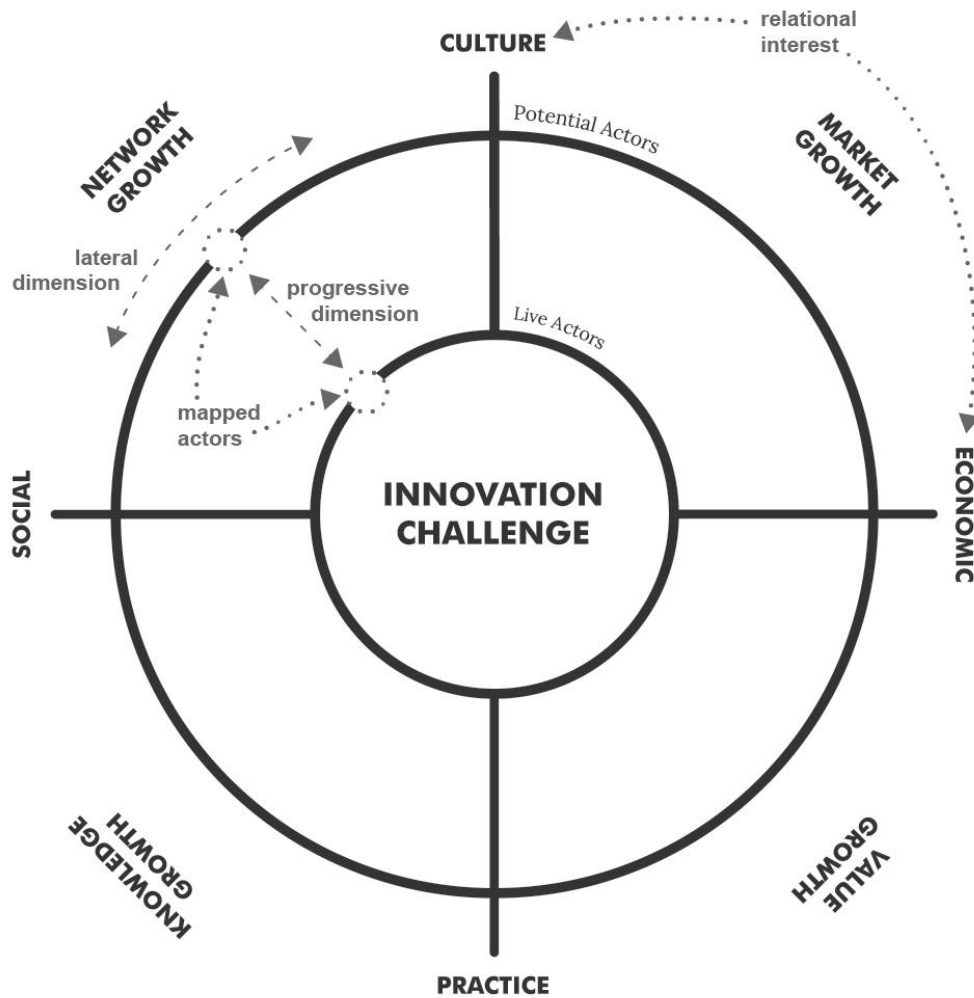


Figure 2: *Annotated Creative Growth Model applied within DING*, (Johnson 2018)

The Model is designed to foreground the interests and opportunities for creative enterprise, which this paper highlights as an opportunity to frame and capture value created within relational exchanges, in balance with transactional exchanges dominant in economic models of support and evaluation. It is not simply an explicit mapping tool, although it can be used as a structure for visual mapping, but as a framework for conceiving, supporting and evaluating creative growth along relational lines of interests, roles and exchanges. The Model was developed at the start of the DING project, where it was then adapted into a programme of engagement activities using mapping tools, workshop activities and evaluation criteria to engage and support development for creative enterprise in the Highlands and Islands of Scotland.

**Case Study: Design Innovation for New Growth (DING)**

A case study approach is applied to DING as it can deal with multiple causation and complexity (Bell 2005) and can help critically evaluate design practice for ‘universal ideas to be extracted’ (Breslin and Buchanan 2008: 38). For the purposes of this paper, case studies are understood as a key method of empirical inquiry that ‘investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly

evident' (Yin 2009: 18). This case study is presented in three sections. Firstly, by describing how the Model was applied methodologically across the project. Secondly, through presenting three creative micro-enterprises supported through a *DING Innovation Fellowship* as 'case examples,' which used the Model to capture their development. This follows the argument drawn by Yee (2010) that such examples can help to find underlying principles of the phenomenon being explored. Finally, through presenting insights from a final *RoundDING* event reviewing the project with key stakeholders and a critical analysis on how the Model was able to extract situated conceptions of value. The data sources for this case study came from qualitative data accumulated through workshop group discussions with thirty-two creative practitioners and entrepreneurs across three DING Studios (workshops) in October 2017, interviews with the eight DING Fellows in July-August 2018 with questions designed from the Model, group discussions with eleven participants at a RoundDING roundtable workshop in October 2018, and reflective accounts from the three authors.

### ***Applying a Creative Growth Model***

The aim of DING as a follow-on project was to apply the Design Innovation methods and approaches developed and tested in DiA with new rural audiences in the Highlands & Islands region. The Model was applied as a consistent way to frame Design Innovation engagement with existing creative networks, including the Orkney Festival Forum, Shetland Arts development agency and Emergents crafts support agency as partners. In October 2017, three DING Studios (workshops) were co-designed around innovation challenges identified with these partners, framed by the Model's growth sections. DING Studio activities included *network mapping* the live and potential people, organizations and assets around individual and collective innovation challenges; *provocation discussions* (see figure 3) using statements exposing the challenges and opportunities responding to each growth section of the Model; and *trajectory mapping* (see figure 4) ideas for growth in response to such challenges and opportunities balancing cultural and economic goals or milestones along a projective journey (Johnson and McHattie 2019).



Figure 3: *Provocation Discussion tool used in all DING Studios (Johnson 2018)*

Figure 4: *Trajectory Mapping tool used in Shetland DING Studio (Johnson 2018)*

In January 2018, eight creative micro-enterprises were selected, with our partners in Orkney, Shetland and craft as expert panel, by calling for proposals of creative

innovation that responded to the Model's four growth criteria. This *DING Innovation Fellowship* delivered their projects between March 2018 and September 2018, which included a Work In Progress Showcase when all eight projects were exhibited at the creative industries conference XpoNorth in July 2018. The Model was not used to directly support each Fellow, but at the end of their projects to frame questions and map evaluation interviews on the progress, opportunities and barriers experienced in their respective projects. In October 2018, partners, Fellows and representatives from national support organizations of creative industries attended a project showcase and roundtable discussion called the RoundDING. This showcase presented the evaluation maps of each Fellow and reflected on the programme and outcomes delivered through DING and the Model through discussion facilitated and captured through a mapping activity, again using the Model as a framework (see figure 5).

The evaluation maps do not explicitly lay out the relations and actors, but identify captured examples of relational exchange from a selection of quotes numbered and mapped around the Model for clearer presentation in relation to *actors, values, challenges, things* and *places*. Such a mapping is proposed as articulating a form of *value constellation* (Normann and Ramirez, 1993; Escalante, 2019). The next section presents three case examples from the Fellows of relational exchanges captured using their respective evaluation maps.



Figure 5: *RoundDING Mapping Review with DING participants* (credit: Jonathon Butler 2018)

#### *Case example: Cross-applied Textiles and Jewelry*

A practitioner in jewelry, knitting and felting from the north mainland of Shetland proposed cross-applying the design processes of two different disciplines to develop new complimentary designs in knitwear and jewelry inspired by aerial views of local archaeological sites. From the mapped evaluation interview (see figure 6), three quotes are selected representing relational exchanges of situated conceptions of value.

Quote no.6 reveals value created through a productive internal relationship developing between the practitioner's two disciplinary processes that challenged her 'fixed ideas' of how each discipline worked in practice. This was thus mapped as a live development of new knowledge in her practice. Quote no.10 highlights how this new process produced new jewelry designs that were given added value through a rich, authentic narrative of maker, process and heritage. Quote no.17 notes the practitioner reaching a new audience, who valued and purchased her new designs based on their shared interests, on which they wished to build a potential exchange relationship. Overall, such relational exchanges tell a story of a maker's growing personal confidence built on developing a sophisticated, personal design process on subjects of local heritage treated with such respect to have attracted a new audience of shared cultural interest.

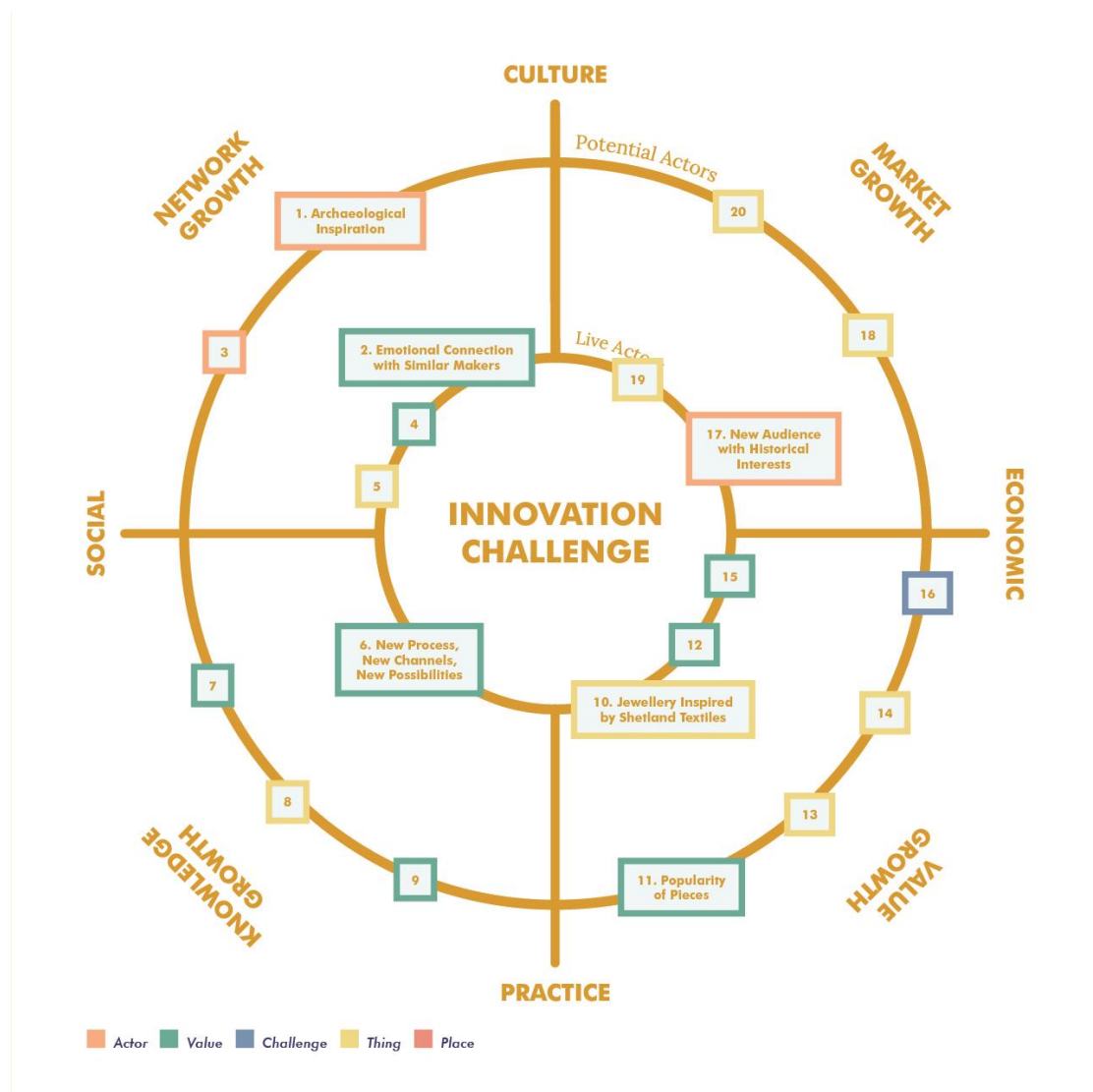


Figure 6: Modeled evaluation for Cross-applied Textiles and Jewelry (Johnson 2018)

#### 6. New Process, New Channels, New Possibilities

*'The value of this project was more to try and open my mind a bit further, because in the past when I was designing for jewelry, I had fixed ideas of how you design for jewelry, or fixed ideas for knitwear, but by crossing the two I could see how it opened up channels in my head, going at an oblique angle*

*and gave me new insight into what was possible.'*

10. Jewelry Inspired by Shetland Textiles

*'The enamel piece that I made that I wear [...] it's been really good for me to speak about it and say it was inspired by lace knitting and Fair Isle knitting, even though it's a solid piece of jewelry with mosaic enamel, it's given me an interesting design story, helped me tell my story.'*

17. New Audience with Historical Interests

*'It's directly historical, but it's developed so that it's not twee. It's historical but for an audience interested in history, so I think it will be well received in museum shops. I was linking methods through my previous work but it's lifted me into that level of folk who are interested in historical artifacts.'*

*Case Example: Printmaking Workshops*

An Orkney-based printmaker, dedicated to providing open access facilities for printmaking, delivered a series of workshops to bring together the traditional skills of hand printing, typesetting and local dialect with texting shortcuts and messaging. Participants would work on a series of creative responses to be developed into a series of hand-printed publications. From the mapped evaluation interview (see figure 7), quote no.1 tells of the assembly of a new community of practitioners, who had developed a shared sense of value around printmaking through the workshops, exploring the outcomes, commitments and norms that could be developed. Quote no.4 reflects on the power of setting a thematic brief for the workshops, which provided a stronger context for engaging a diversity of practitioners and disciplines. Quote no.9 emphasises the effects of using a thematic driver in how the participants would look to each other's interpretations, responses and, ultimately, collaborate on richer outcomes. Overall, such relational exchanges tell a story of situated value through thematic creative engagement to gather a diverse community of practice, and of interest, around the qualities and new possibilities of an historic printmaking asset.

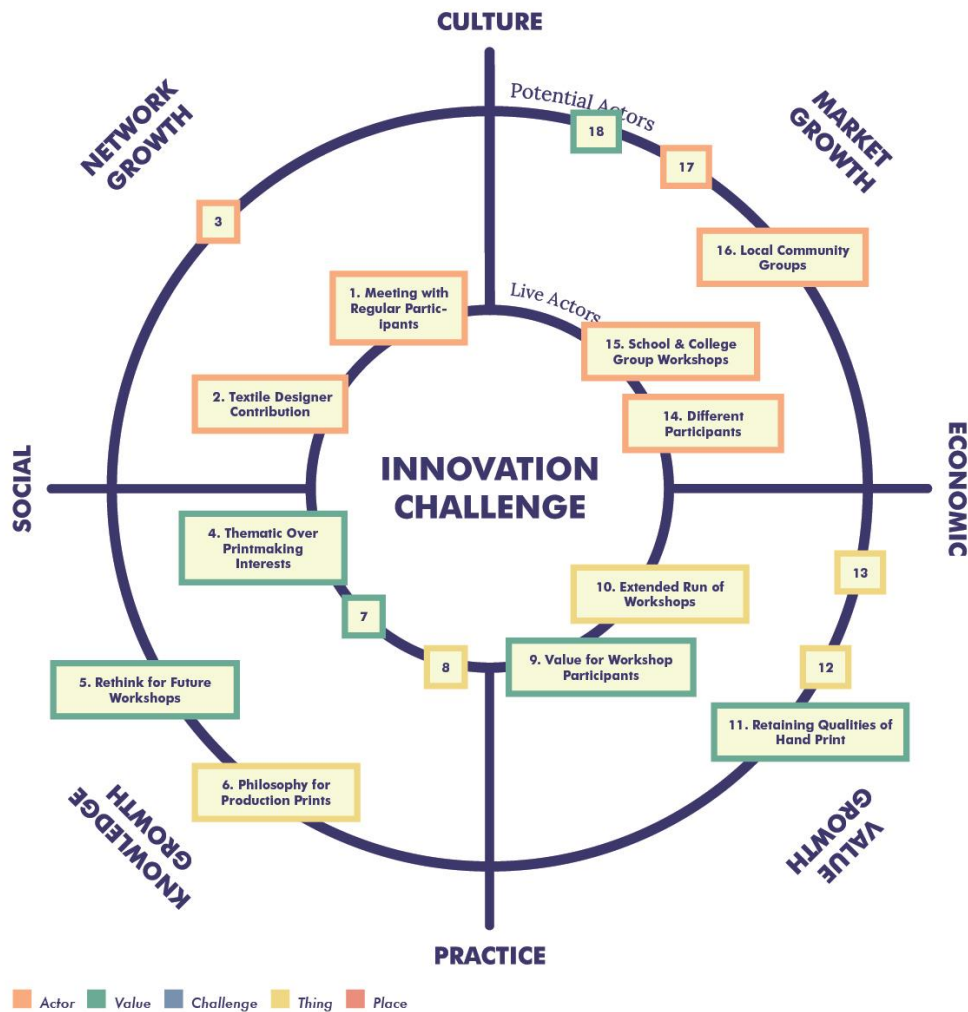


Figure 7: Modeled evaluation for Printmaking Workshops (Johnson 2018)

#### 1. Meeting with Regular Participants

*'In August, we brought together six of the most regular project participants. Having arrived at a number of individual outcomes, we needed to think collectively about how these formed a set of wider outputs for the project - in terms of a 'product' and a series of limited editions. There was considerable variety and possibility in what people wanted to do with what they had achieved so far, and the challenge for us is in retaining the integrity of the hand printed letterpress.'*

#### 4. Thematic Rather Than Printmaking Interests

*'The Columbian Press is such a wonderful piece of historic equipment, that there will always be ways to get people interested in it. What has been different about our approach to this project is that we promoted it thematically, rather than an introduction to printmaking or letterpress. Behind the project there's a traditional printing process but it's also about new media, dialect, language and communication more broadly. This has been a significant outcome of the project – bringing us a more diverse audience.'*

## 9. Value for Workshop Participants

*'We have seen a new and different audience involved in the project; and the ideas that they've come to the workshop with. They've not waited for us to give them ideas. That's been really encouraging for us, and a great demonstration of working together. There has been a strong collaborative element to the sessions. Participants have come with ideas, connected with someone else who might have come along with a specialist knowledge about certain words or different aspects and perspectives.'*

### *Case example: Festival of Islands*

The ØY Festival is an annual three-day festival of islands held every November at The Kelp Store on Papa Westray, one of the northern-most islands of the Orkney archipelago with a population of approximately 90 people. The island's ranger is also an artist and ØY festival director, so proposed developing the latest festival by expanding the festivals programme of activities and creative talent, while retaining the co-operation and inclusion of island residents (at least half the residents usually take part). From the mapped evaluation interview (see figure 8), quote no.8 establishes the importance of the festival theme in facilitating conversations and contributions to attract and connect creative talent that can imaginatively consider values within island life. Quotes no.9 and 13 (and indeed many more not presented here) expand how such a theme mediated a diversity of relationships with locals, collaborators and international contributors. This led to him planning for more distributed curatorial roles and insights to inform processes for future festivals. Overall, such relational exchanges told a story of situated value through developing a festival's organising sensibilities to balance local views, assets and traditions with exploratory creative expression, all while cultivating a high quality standard and reputation.



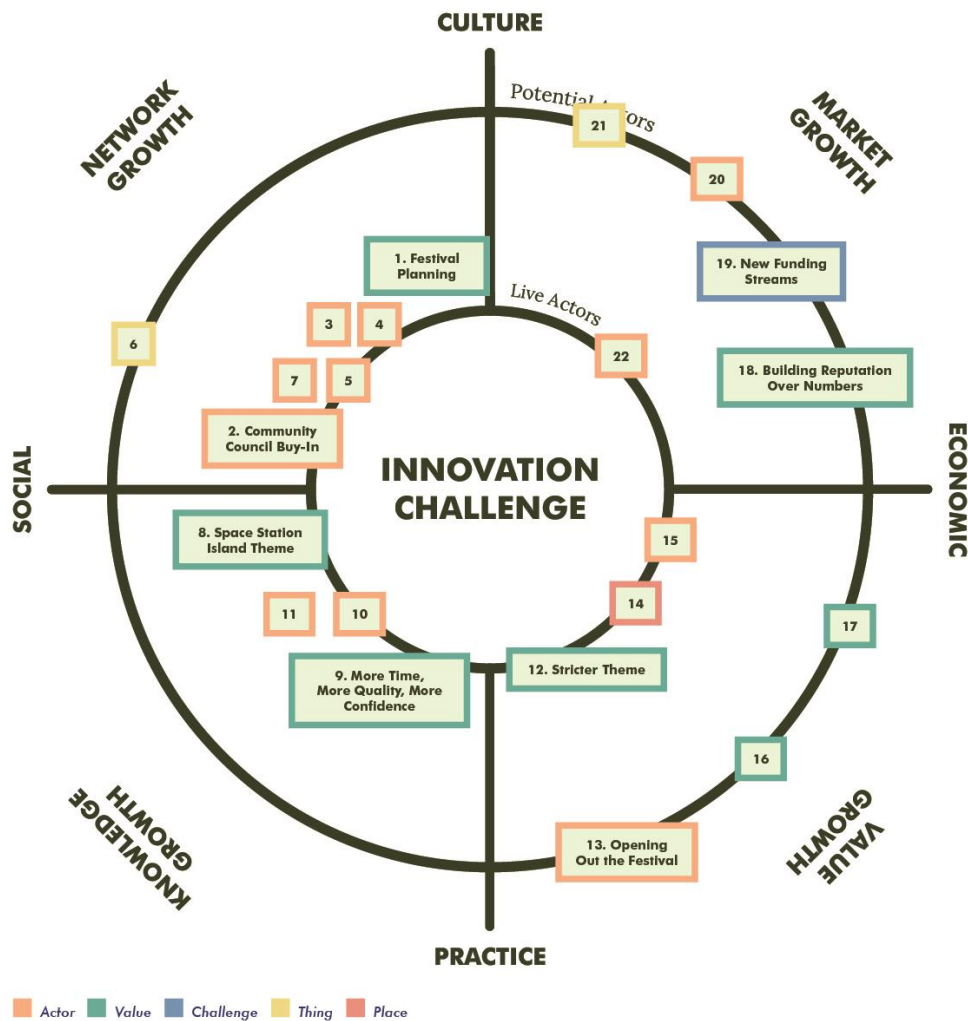


Figure 8: Modeled Evaluation for Festival of Islands (Johnson 2018)

### 8. Space Station Island Theme

*‘The theme is based on spaceships and islands, so imagining islanders as future pioneers of far off planets. Imagining that islanders are good at the pioneering skills that they’ve got are very useful, and obviously being in a small community could mirror a small community on another planet where you’ve got to get on with each other and create a new civilization and a way forward.’*

### 9. More Time, More Quality, More Confidence

*‘Time gives you the opportunity to speak to more people, consider the theme more and ensure the quality is better considered. We can be more strategic now, which is quite nice, with people planned for next year. We’ve also considered the theme for next year as well, which might be a little more serious compared to this one, which was a little more playful. We’ve got more confidence about how we run the festival and that has molded into making next year feel quite different as part of the process.’*

### 13. Opening Out the Festival

*‘The more we do open it out for other people to get involved in it will keep it alive, and could be one way it could develop without changing in terms of size and shape, but within itself letting lots of other people getting involved in the curatorial part of it as well.’*

### ***Reviewing a model for creative growth***

This section now reviews insights from the RoundDING discussion in relation to each growth section of the Model. Each section incorporates further critical discussion in relation to how effectively the Model and Design Innovation approach framed situated conceptions of value as relational exchanges, and how this might better understand and support creative work within creative economic support services and policy.

#### *Network Growth – new and enhanced relations and communities of practice*

From the Fellowship evaluation maps, there was an acknowledged clarity in how new and enhanced connections were created by each Fellow, such as through gaining buy-in from the local community council, or by forming a new thematically-driven printmaking group. Participants saw a vital role to play for ‘superconnectors’ – people and organizations both leading in their discipline and inclusive in their approach – within their regions or networks, and that DING and the Creative Growth Model offered an approach to identify and enhance their influence. From a SET perspective, framing the Fellows as superconnectors demonstrated examples of ‘core competence’ in selecting and negotiating potential partners, or moments of need to develop such skills. Through the programme of Design Innovation activities delivered, this paper argues that the Model provided a disciplined approach in identifying creative entrepreneurs open to creating new connections and capturing the nature of the relational exchanges the Fellows then made.

RoundDING participants identified the challenges of how to judge the readiness of individuals or projects, how to offset the short-termism implicit in projects such as DING, and how to formalize more responsibilities across the stakeholders such a project brings together. It was recognised that the DING team and Model, as resourceful and influential academic actors, played an important role in coordinating strong connections and that this mediating role would be difficult to replicate. As such, it was noted how such a process could more strategically include using and connecting assets both locally and across the region to encourage longer-term relationships in such initiatives. This would then allow for designing responsive funding models built on a trajectory of previous work and development.

#### *Knowledge Growth – new and enhanced forms of practice*

Skills development was apparent across all the Fellows, however conceptual development was often more valued, such as through the influence of thematic curation to both gather and inspire creative work. This perhaps emphasises a fundamental distinction of creative relational exchange captured through the Model, over transactional, where ideas exchanged in shared creative work implicitly develops shared conceptions of value. A particular strength in the approaches taken was noted in the framing of forward direction, as opposed to dwelling on current problems, and encouraging visible discussion across workshop participants:

*“Particularly forcing people to stand in the corner [in provocation discussions] to state their position. It opens up this middle ground that helps realize a compromise. The trajectory [mapping] one as well, creating visuals and methodological bits and pieces that I’ve definitely picked up from it.” – Shetland DING partner*

The progressive and lateral dimensions within the Model’s design and activities is argued to have offered a ‘staging’ (Binder et al., 2011) of creative enterprise and collaboration, which facilitated the ‘objectifying, articulating and challenging assumptions’ among participants. As well as offering important learning for the partners on the concerns and ambitions of young creatives, they also revealed how all practitioners were on a constant learning journey, while the Model ‘using heftier language’ that was ‘more challenging’ perhaps ‘helped attract stronger [Fellowship] applications.’ As such, multiple participants reflected the Model and some of the activities work well as ‘potential planning tools for arts organizations to capture positive outcomes’ as part of evidence-based practice in their own processes. For example, how the contrasting expertise of the partners was able to inform quality comparisons between diverse DING Fellowship proposals, demonstrating a facilitated competency to engage with situated conceptions of value. This opened up proposals for future efforts to bring wider disciplines and industry perspectives into such panels to ‘get an insight on the value generated by certain aspects of the creative industries.’

*Value Growth – new and enhanced products, services and experiences*

Captured across the eight Fellowship outputs were the rich narratives of value captured along relational lines. Two Fellows produced new, ready for sale, product collections (that also developed new partnership models), two developed new interdisciplinary offerings (festival and printmaking workshops) enhancing existing assets, three developed new modes of practice reaching new audiences (silversmith, knitwear and performance art), while the final Fellow developed a new network sharing case examples of rural creative enterprise. Of interest in this discussion was that, identifying the relational nature of value created was one thing, but to know how to exploit and cultivate such value was another more emergent, ongoing process. One craft maker participant asserted how doing what they were doing in such rural places *was* a form of innovation, balancing multiple roles for highly unique enterprises driven by developing their own practice:

*“Time is the most precious resource, as learning is continual reflection time. You learn by doing; just make it and it often turns out in a way you didn’t expect.” – Craft RoundDING participant*

The Fellows commented on how engaging the process felt particularly valuable, as usually time spent applying for resource could often outweigh any benefits gained, with no guarantee of successfully getting the support. As such, the wider DING process was commented as demonstrably listening and acting on such concerns. We argue that this was partly achieved by having a consistent Model framing activities, offering a shorthand to make sense of diverse opportunities. As such, existing funding models for the arts were reflected as being ‘static’ by the Orkney partner and proposed a ‘funding process that allows practitioners to feedback’ in more resource-efficient and accessible ways, while sharing and learning the different types of value or progress they could create. This particularly reflected on the challenge of how

DING absorbed risk through an academic research programme aiming to learn about creative value and innovation. As such, the emerging values of the programme and Model need further development to offset the risk more situationally relevant organizations would need to absorb.

*Market Growth – new and enhanced audiences and communication*

A fundamental challenge to what participants and partners in the DING project confronted was how to reach new audiences in new ways. While potential audiences were being identified through the evaluation interviews, such as through discovering archaeological enthusiasts as customers or understanding how to build reputation *over* numbers for a small island festival, they largely remained underdeveloped. However, this drew an emphasis to consider multiple audiences for creative projects and innovation and not to underestimate the breadth of interest that their work could gather. Across the project and Fellows, much of the situated conceptions of value created were emergent, unpredictable or temporal in nature, yet all valid contributions to more ‘fractal forms of growth.’

*‘We talked about the learnings that come from exploring creative potential, and how those ideas could be progressed in their particular context. I think there is a lot of potential we could be exploring with the project.’ ~ creative industries policymaker participant at the RoundDING*

Fellows and partners both reflected on how they might disseminate the emergent value captured through DING and the Model to ensure such opportunities could be taken. Such a process is reflected to simulate developing pathways to impact from creative work, for which routes to market is one of many options that the Model is able to frame. Indeed, following DING, one Fellow has reported using the Model to frame annual general meetings to grow engagement activities and audiences for an arts centre, while another has used it to successfully apply for funding and set up a new arts and crafts shop. The Shetland partner also reported that two Fellows had since ‘applied for visual arts and craft awards without the need for any feedback, they just got the award [...] they had built the confidence and found an endorsement to their work on a really fundamental level.’ How much the Model can be credited with such developments is difficult to evidence, but it has been cited as playing a role in developing their entrepreneurial thinking, which this paper identifies as developing their ‘relational exchange competence’ (Lambe, Wittmann and Spekman, 2008). As such, the critical question going forward is how the Model could support shared learning to develop and distribute relational exchange competencies across such networks.

**Conclusion: capturing the value of creative growth**

This article set out to contribute to the challenge of balancing the increasing demand on creative enterprise to satisfy innovation agendas driven by economic notions of value. More networked and collaborative paradigms were discussed through concepts of value constellations and relational exchange as approaches to developing more situated conceptions of value. A Creative Growth Model was presented as contributing to this challenge space through a case study of Design Innovation activities delivered in the Highlands and Islands region of Scotland, where low levels of entrepreneurialism and economic growth were viewed as particular barriers of the region. However, this paper proposes that exploring innovation with creative

enterprises through notions of relational exchange can produce a rich, qualitative evidence base of value creation.

Methodologically, the model and methods applied through DING offered an approach to framing discussions through a process of ‘staging’ opportunities and challenges for creative enterprise and collaboration. This enabled participants to engage in constructive debate and discourse around complex contexts, which also generated insights and learnings that directly fed into later stages of the project. With regards the DING Innovation Fellowship, the Model offered a way to frame applications and then capture and evaluate their progress. Project participants commented how this offered validation of more ‘fractal’ forms of development and growth that could be valued and identified as appropriate for the innovative work they were engaging in relation to their situations.

While the model was used to some effect as a way of reporting and sharing the progress made by Fellows, there is much more potential to translate these stories of innovation into more compelling narratives and case studies. What the Model offered in an evaluation process was a consistent set of reference points and questions to articulate relational exchanges as forms of value creation. The challenge therefore emerges for such a Model to play a continual and active role in an ongoing evaluation process of creative enterprise across regional or shared contexts. Such strategies are argued as possibly targeting regularly funded organizations or support services, who would have long-standing relationships with their communities and networks, and linking in with existing regional funding initiatives, such as creative clusters. The major contrasting offer that applying such a Model at a networked scale of creative enterprise development would be in prioritising the emergent conceptions of situated value to inform strategic models of funding research and development, beyond preconceived notions of economic value through new IP, business growth and digitization.

What DING stopped short of doing through the Model was to follow through to question the wider actors Fellows identified within their projects to consolidate notions of situated value, nor articulate the transferability of such changes in outcomes, process or contextual factors. This would need to be explored as part of further research and dissemination to share such cases of situational value and learn how wider stakeholders interpret their relevance and transferability to their own contexts. On the contribution to more situated understandings of value creation, identifying and capturing the value of fractal forms of growth can only concur with Dovey et al. to ‘shift the frame for the evaluation of a creative enterprise sector from ‘high growth start up’ to ‘sustainable network’ (2016). This emphasises the role of network facilitators, ‘superconnectors’, or *points of passage* within actor-network theory, to be identified as a more strategic conduit of creative economic policy inclusive of creative micro-enterprises. Incorporating concepts of relational exchange from economic notions of social exchange theory (SET) identified the prevalence of ‘informal mechanisms’ (such as sharing work, assets and ideas) within the work of creative micro-enterprise, and the necessary coordination of distributed ‘relational exchange competence’ (such as the selection and negotiation of relationships). From the Fellowship case examples of value constellations framed through the Model, these can only claim to have articulated *emerging* notions of value and *potential* competencies to be built around them.

As such, further research is proposed to test this model more thoroughly and generatively with creative networks of micro-enterprises and support services. This would engage with key questions on co-design value creation set out by Whitham et al., particularly to ‘uncover the intersections between the distinct practicalities of value that can connect together the interests of communities, assessors, and collaborators’ (2019: 4). In future, evaluation frameworks based on relational exchanges would seek to absorb risk in developing creative opportunities by providing mechanisms for actors to co-create conceptions of value within relationships, while enabling them to translate such value into pathways to impact, including economic activity, with economic actors. The prospect of such relational growth frameworks, supported through generative processes offered by Design Innovation, would be to develop practices around emergent conceptions of value in ways that are seen as valid to, practicable with, and offer learning on existing networks, contexts and shared cultural interests.

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#### References

AHRC (2017) *Creative Exchanges: The AHRC Knowledge Exchange Hubs for the Creative Economy Report*, Swindon: AHRC.

Akrich, Madeleine (1992) ‘Beyond social construction of technology: the shaping of people and things in the innovation process’ *New technology at the outset* (pp. 173-190). Campus/Westview.

Bazalgette, Peter (2017) *Independent Review of the Creative Industries*. Department for Digital, Culture, Media & Sport (DCMS).  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/649980/Independent\\_Review\\_of\\_the\\_Creative\\_Industries.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/649980/Independent_Review_of_the_Creative_Industries.pdf). Accessed May 2019

BEIS and DCMS (2018) *Industrial Strategy Creative Industries Sector Deal*, Available at  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/695097/creative-industries-sector-deal-print.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/695097/creative-industries-sector-deal-print.pdf). Accessed May 2019

Bell, Judith (2005) *Doing Your Research Project*. Buckingham: Open University Press.

Binder, Thomas, De Michelis, Giorgio, Pelle, Ehn, Giulio Jacucci, Per Linde, and Wagner, Ina (2011) *Design Things*, MIT Press.

BIS (2015) *The Dowling Review of Business-University Research Collaborations*, London: Department for Business, Innovation and Skills.

BOP Consulting (2010) *Mapping the Creative Industries: A Toolkit*, Commissioned by British Council, London: BOP Consulting.

Breslin, Maggie and Buchanan, Richard (2008) 'On the Case Study Method of Research and Teaching in Design' *Design Issues*, 24 (1), 36–40.

Brown, Tim (2009) *Change by Design: how design thinking transforms organizations and inspires innovation*, New York: Harper Collins.

Callon, Michel (1984) 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay' *The Sociological Review*, 32(1\_suppl), 196–233.

Clarke, Adele (2005) *Situational Analysis: Grounded theory after the postmodern turn*, California: Sage Publications.

Creative Scotland (2016) *A Strategy for the Creative Industries*. Edinburgh: Creative Scotland. <http://www.creativescotland.com/resources/our-publications/plans-and-strategy-documents/creative-industries-strategy-2016-17>. Accessed May 2019

Cross, Nigel (2011) *Design thinking: Understanding how designers think and work*. Berg.

Crossick, Geoffrey (2006) 'Knowledge Transfer Without Widgets: The Challenge of the Creative Economy' Lecture to the Royal Society of Arts in Leeds on 31 May 2006. Goldsmiths, University of London.

Crossick, Geoffrey and Kaszynska, Patrycja (2016) *Understanding the value of arts & culture: The AHRC Cultural Value Project*. London: AHRC.

Cultural Enterprise Office (2015) *Performance and Impact Report 2014/15*. <http://www.culturalenterpriseoffice.co.uk/about/our-impact/>. Accessed May 2019

Day, George, S. (1995) 'Advantageous alliances' *Journal of the Academy of Marketing Science*, 23(4), p.297.

Design in Action (2016) *Design in Action: A new economy of knowledge exchange*, Dundee: Design in Action. <http://www.designinaction.com>. Accessed May 2019

Dovey, Jon, Moreton, Simon, Sparke, Sarah and Sharpe, Bill (2016) 'The practice of cultural ecology: Network connectivity in the creative economy' *Cultural Trends*, 25(2), 87-103.

Escalante, Maria, A. L. (2019) 'Framework of emergence: from chain of value to value constellation' *CoDesign*, 15(1), pp.59-74.

Garnham, Nicholas (2005) 'From cultural to creative industries: An analysis of the implications of the "creative industries" approach to arts and media policy making in the United Kingdom' *International Journal of Cultural Policy* 11 (1): 15-29.



Helgesson, Claes-Fredrik and Fabian Muniesa (2013) 'For What It's Worth: An Introduction to Valuation Studies' *Valuation Studies* 1 (1): 1–10.

Highlands & Islands Enterprise (2013) *Creative Industries Strategy, 2014 – 2019*, Highlands & Islands Enterprise, Inverness.  
<http://timeline.hie.co.uk/media/1361/creative-industries-creativeplusindustriesplusstrategy.pdf>. Accessed May 2019

Johnson, Michael, P. (2016) *Mapping Design Things: making design explicit in the discourse of change*, PhD Thesis, Glasgow School of Art

Johnson, Michael, Champion, Katherine, McHattie, Lynn-Sayers and White, Gregor (2016a) 'Beyond the Bottom Line: redefining the value of design in start-up formation' *The 20<sup>th</sup> DMI: Academic Design Management Conference ADMC16*, Boston USA, July 28-29.

Johnson, Michael, P., White, Gregor, Prior, Suzanne and Galloway, Dayna (2016b) "Sharing the Vision: representing the matters of concern for design-led fledgling companies in Scotland." *20th DMI: Academic Design Management Conference. Boston, USA, 22-29 July*.

Johnson, Michael and McHattie, Lynn-Sayers (2019) *Design Innovation for New Growth: Final Report*. Project Report. The Glasgow School of Art, Glasgow, UK  
<http://radar.gsa.ac.uk/6920/>. Accessed October 2019

Kitagawa, Fumi and Lightowler, Claire (2013) 'Knowledge exchange: a comparison of policies, strategies, and funding incentives in English and Scottish higher education' *Educational Research and Evaluation* 22 (1): 1-14.

Kornberger, M., Justesen, L., Madsen, A. K. and Mouritsen, J. eds. (2015) *Making Things Valuable*. Oxford: Oxford University Press.

Lambe, Jay, C., Wittmann, Michael, C. and Speakman, Robert, E. (2001) 'Social Exchange Theory and Research on Business-to-Business Relational Exchange' *Journal of Business to Business Marketing*, 8(3), 1-36.

Latour, Bruno (2005) *Reassembling the Social: an introduction to actor-network theory*, Oxford: Oxford University Press.

Mason, C., Brown, R., Hart, M., & Anyadike-Danes, M. 2015. "High growth firms, jobs and peripheral regions: the case of Scotland, *Cambridge Journal of Regions, Economy and Society* 2015, 8, 343-358.

Moreton, Simon (2016) 'Rethinking 'knowledge exchange': new approaches to collaborative work in the arts and humanities' *International Journal of Cultural Policy* 22 (1): 100-115.

Neumeier, Martin (2009) *The Designful Company: how to build a culture of nonstop innovation*, Berkeley: New Riders.

Normann, Richard and Ramirez, Rafael (1993) 'From Value Chain to Value Constellation: Designing Interactive Strategy' *Harvard Business Review* 71 (4): 65–77.

O'Connor, Justin (2016) 'After the Creative Industries: Cultural Policy in Crisis' *Law, Social Justice & Global Development* (1): 1-18.

Ross, Andrew, G., Adams, John and Crossan, Kenny (2015) 'Entrepreneurship and the spatial context: a panel data study into regional determinants of small growing firms in Scotland' *Local Economy* 30(6) 672-688.

Sanders, Elizabeth, B-N. & Stappers, Pieter, J. (2008) 'Co-creation and the New Landscapes of Design' *CoDesign; International Journal of CoCreation in Design and the Arts*, 4(1), 5-18.

Senior, Tim, Cooper, Rachel, Dovey, Jon, Follett, Georgina, Shiach, Morag (2016) *Connecting to Innovate: A Preliminary Report on the Achievements of the AHRC Knowledge Exchange Hubs for the Creative Economy*. Swindon: AHRC.

Thackara, John (2005) *In the Bubble: Designing in a complex world*, MIT Press, Cambridge.

Upton, Stevie, Vallance, Paul, and Goddard, John (2014) 'From outcomes to process: evidence for a new approach to research impact assessment' *Research Evaluation* 23 (1): 352-365.

Van der Borgh, Michel, Clodt, Myriam, and Romme, Georges, L. A. (2012) 'Value creation by knowledge-based ecosystems: evidence from a field study' *R&D Management*, 42(2), 150-169.

Wenger, Etienne (2000) 'Communities of practice and social learning systems.' *Organization*, 7(2), 225-246.

Whitham, Roger, Moreton, Simon, Bowen, Simon, Speed, Chris and Durrant, Abigail (2019) 'Understanding, capturing and assessing value in collaborative design research' *CoDesign*, 15(1), 1-7.

Yee, Joyce (2010) 'Methodological Innovation in Practice-based Design Doctorates' *Journal of Research Practice*, 6 (2), 1–23.

Yee, Joyce, White, Hazel and Lennon, Lindsey (2015) 'Valuing Design in Public and Third Sector Organizations' *11th IEAD Conference 'The Value of Design Research'*, Paris, April 22-24, 2015.

Yin, Robert, K. (2009) *Case Study Research Design and Methods*. Fourth Edition: Sage Publications.