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## RESEARCH PERSPECTIVES ON CREATIVE INTERSECTIONS

# Design, Collaboration & Evolvability: A Conversation About the Future

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This paper is an exploratory conversation on collaboration, shared value, ecosystems, platforms, silent designers, the unexpected and ambiguity. It is held together by the idea of evolvability and a continuous loop of creation and design. It aims to report a journey that has no real starting point and no end in sight, and while it refers to a number of thinkers, it does not subscribe to any single school of thought. It has deep foundations in various disciplines, but remains aloof of single perspectives. It has been written as an experiment, in respite from conventional formats of producing academic text. It does, however, maintain an engagement with the serious matter of creating the future of design innovation, suggesting that we need to engage deeply with evolvability to benefit from ambiguity and the unexpected. This means moving from trying to see the future into creating it, a fine task for design.

keywords: Design Innovation, Ecosystems, Collaboration, Evolvability

### Foreword: On Obsessions and Failure

This paper is a dialogue<sup>1</sup>, a conversation paper, an unfolding narrative and exploration, the musings of two people interested in the future of design. The wide and meandering discussion<sup>2</sup> started on collaboration and ended there - wondering where are the spaces for

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<sup>1</sup> In line with Schön (1991) we understand reflective practice is a dialogue of thinking and doing through which one becomes more skilful.

<sup>2</sup> A series of sessions in 2016-2017 in various interesting places over coffee and sometimes cakes.



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design? Should we be looking for places where design can contribute to shared value (creation) within ecosystems - if so, how? If collaboration is a better way to create value (rather than leaving things to market forces), how can we justify the cases and how could design contribute? And is there a dark side to collaboration that goes unnoticed?

In a world that is obsessed with high speed innovation and enamoured with the cult of the new, we as the design innovation community seem often to come close to losing our touch with reality. We strive to create lasting meaning in new products and services, only to find that in many (if not most) cases our services fail to create lasting impact, our intellectual outputs quickly becoming meaningless, our solutions are forgotten (more or less) as soon as they were introduced, and our investment in the collaborative efforts with our clients and stakeholders fails to result in longer term engagements. Widely speaking, the track record of positive transformation through design does not seem to reach the levels that designers would like, even though there are excellent examples of successful initiatives<sup>3</sup>.

As organisations, we seem to be inventing but not innovating<sup>4</sup>, being often incapable of diffusing our ideas and solutions to a widest possible audience, even though we invest tremendous effort into searching for (the most) novel ways of doing things. And when we succeed, it is often brand-based diffusion that is driven by extensive marketing investment made by financially driven business enterprises<sup>5</sup>, often operating in and through non-designerly spaces. In addition, should we create valuable and diffused solutions for our clients and stakeholders, we often fail to capture and retain the (financial and other) added value and resources to develop our practice and skills still further<sup>6</sup>.

On a personal level, we appear to travel through professional and personal encounters like ordinary psychotics<sup>7</sup> that fit into the fabric of society on the surface but harbour deep and sometimes impenetrable issues and misfit between what we are doing, how we go about it, and how we should go about our engagements. Try as we might, in many cases we battle to create meaning in our engagements – and not due to lack of talent or application. Our abilities to collaborate make us social beings, but are we driving ourselves into dark corners of professional practice through this same will and skill of jointly doing things?

### **A Conversation Starter: What is wrong?**

XY: What is wrong? That is a really good question. I think that the standard response, given in as many corridor conversations as there are designers, is that we are simply misunderstood, and we are not offered the opportunities to do well, our craft is not

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<sup>3</sup> See e.g. Yee et al. 2013 on transformative design cases.

<sup>4</sup> We define innovation here as new, useful and successful. Success can be commercial or wide adoption of an idea into practice. Inventions can be useful and new, but they only become innovations when diffused widely (Koria 2009).

<sup>5</sup> This is not intended as a critique towards profit making business enterprise, but a note that organisations are driven by very diverse overall aims.

<sup>6</sup> The authors note that design can be both good business and a bad one. If you are paid by the hour for the value you create, you tend to be in a commodity trap, where the lowest price bidder wins. If you are the successful brand owner, design can be great business.

<sup>7</sup> Referring to the Lacanian view, see e.g. Darian Leader (2012)

appreciated - as a discipline, as knowledge intensive service providing organisations, and as individuals that operate in the machinery.

AB: So, do you think designers should abandon all hope?

XY: No, I don't think so...we all call for representation at the board level, attempt to justify the value of our inputs through multiple metrics, and create new combinations of services to create fantastic products, services and business models<sup>8</sup>. But the discourse seems to be that design is bobbing on the waves of globalisation with little direct control or authorship of the direction of travel. Despite all the hype and the investment into the new cool, organisational Darwinism is at play, and organisations wither away and people find other things to do.

AB: Perhaps we are looking in the wrong direction. What if we simply do not understand well enough the dynamics of collaboration in traditionally non-collaborative environments? Are we trying to co-create in highly polarized environments, where relationships are based on market transactions and not on collaborative efforts? What if the assumptions on the importance of the human factor that the discipline, organisations and individuals carry with them are simply not suitable for the work we do?

XY: If you say that you are essentially putting into question the validity of the whole human factor school of thought? I mean, look at how much effort has gone into developing the human factor discourse over the last decade and half, with the strong emphasis on collaboration as the driving force. Together with reflective reframing, divergence-convergence, future orientation, abductive approaches and empathy we subscribe to the message on the user driven co-creation and collaboration as the key drivers of design thinking<sup>9</sup> and innovation. We may be assuming that our use of a collaborative toolkit (that has been proven to unearth novel perspectives into how users, our clients' clients and stakeholders see and act), also forms the basis for interaction that we have with our direct clients - would this not create shared value? In other words, are you saying that designers may be assuming wrongly that there is a shared value basis for the interaction that happens with clients.

AB: Designers often have a deep inner drive of wanting to make clients happy, solve the problems of customers and communities, address the challenges facing humanity, and make the world a better place - and they believe they have the abilities and tools to do so. For example, service design tools are used to orchestrate brand touchpoints, improve the user experience and offer choice, convenience and differentiation. Design Thinking is engaged as a collaborative and participative process which can generate new ideas for politics and societies, interactions and ideologies. There is no doubt that design thinking workshops give us the momentary feeling that we share the same values, we have some say in where we are going and we can make the world a better place.

XY: But are we really affecting change? Who are these people that design is serving and making things better for – is it for all of us, as humanity, or is it really just business that benefits? Are there cases where design tools and processes are, in effect, giving morally bankrupt institutions an explicit customer journey map with which to dehumanize and

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<sup>8</sup> See among others, Borja de Mozota (2006) referring to the four powers of design, or Pitkänen (2013) on the return of investment of design.

<sup>9</sup> To note that collaborative work underpins design thinking in many ways.

reduce the quality of our interactions for the benefit of shareholder value? Has the success of design thinking and the short-term high of being taken seriously by business left us with a hangover and the rising awareness that design has been 'upsold' so as to make everyone a designer? Success does come with unintended consequences - ask any lottery winner - and this dark side of design (and collaboration) is one we would do well to at least acknowledge.

AB: Designers could start by self-reflectively researching and questioning the real intention behind a particular project. Is this intention aligned with a sense of greater shared value and a connection to our own personal values? Do we, as designers, want to align with a particular way of operating? Are (short-term) measures of success the right ones for the nature of design? Should we challenge whether (long-term) quality of life issues are even measurable? Do we align to Design (an identity and process toolkit) or design to Align (a conscious choice and intent for the future)?<sup>10</sup> It is also worth noting that too much collaboration can be bad for you. Too much teamwork exhausts employees and saps productivity.<sup>11</sup>

### **Collaborating for Shared Value**

XY: Suppose we do recognize that collaboration may not be the holy grail of getting things done, where does that leave the discussion on shared value? I mean, there seems to exist an inbuilt tension in design interventions between the creation of commercial and asymmetric<sup>12</sup> value and the desire of the designers as individuals to create shared value and meaningful solutions in more symmetric arenas. This is very apparent in the interest that individual designers have towards initiatives that have aims to create something for the common good, doing something "meaningful"<sup>13</sup> that makes a difference that we can share with each other.

AB: Is that a problem? As such the asymmetric distribution of value does not seem to be the key issue, but what value is created and by whom? What we are after are meaningful innovations<sup>14</sup> that are concurrently valuable to users, organisations and businesses, the ecosystem and society at large. Perhaps individuals see value in happiness and a sense of belonging, being ecologically sound, getting and bringing value for money, while (business) organisations see profit and corporate social values as being important. The key value for ecosystems is linked to stability.

XY: So, you are saying that shared value is essentially on multiple levels and over multiple categories? How do we then know what the most important value to create is? And why

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<sup>10</sup> Best, K (2016) Experiencing Processes. DESMA Avenues

<sup>11</sup> Collaboration Overload (2016) Cross, R., Rebele, R., Grant, G. Harvard Business Review Jan-Feb 2016.

<sup>12</sup> Understood here as the unequal distribution of rents, benefits, profits from initiatives, usually favouring the commercial owners of the projects.

<sup>13</sup> As a recent example, Cause2Create, was set up by a creative agency in the Hackney Wick and Fish Island design community, East London.

<sup>14</sup> In line with the thinking of den Ouden (2011) and the value relationship between users, organisations, ecosystem and society at large.

would organisations that have been set up to create profit as their main value for their shareholders be interested in user value of the ecosystem related issues?

AB: I think that the value set is negotiated on a case by case basis. There is no single set that applies to all situations. What does apply to all of it is the need to consider value creation over multiple levels and across areas. In terms of living a good life, and how shared value could sit at the core of this, we would have to have some idea of how the creation of shared value contributes to humanity living a good life. If we frame design as a process that enables people to create shared value together, within an ecosystem, through cooperation and collaboration, then the process of design itself is allowing people to work out what their shared value is, together - what it looks and feels like and what it might mean in the context of a specific ecosystem. Design then becomes a mediator of shared value and the medium through which shared value is created and communicated. It is a joint search for collaborative success - however defined.

XY: Could be. It is interesting to note that recently Bridoux and Stoelhorst<sup>15</sup> proposed that collaborative work is more effective and more productive than work which is organised around market transaction principles. It appears that the default interaction is based on market transaction, and that creating collaboration require enabling environments - in other words pointing again to the need to have a conducive ecosystem. They also noted that collaborative modes of working are much more difficult to organize and maintain; if we go back to den Ouden (or even Moore's earlier work<sup>16</sup>) on value multilevel and multi-area frameworks (complex in itself) we can see why these are not easy to achieve. That being said, if you do not recognize the need for a wider framework, you will not see the path there either. But this does put us squarely back into the ballpark of collaboration as the key to create shared value. How would we go about it?

## Modelling Ecosystems

AB: I think we really need to look at ecosystems when we start to look at how shared value is built up. Maybe go back to Moore's early work as a starting point when he first outlined his thinking on business ecosystems in 1993. It has evolved quite a bit since then, and maybe we need to look at entrepreneurial, technical, start-up, and innovation ecosystems (to name a few). But what kind of ecosystems should we examine? I mean, we know that comparative-value ecosystems (such as the Silicon Valley) tend to emerge over time in specific locations driven by serial historical events, and cannot really be replicated<sup>17</sup>. The industry ecosystems, such as the Apple or Microsoft ecosystem, are in turn created (or emerge) through the growth and success of central actor organizations and entrepreneurs<sup>18</sup>.

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<sup>15</sup> Bridoux, Flore; Stoelhorst, J.V. (2016) Stakeholder Relationships and Social Welfare: A Behavioral Theory of Contributions to Joint Value Creation.

<sup>16</sup> See Moore's early work (1993,1996) on business ecosystems, where the complexity was already charted. De Ouden (2011) introduced further complexity through her framework.

<sup>17</sup> This implies that the actors must adapt to the ecosystem, and find it very hard to influence it in significant ways.

<sup>18</sup> These ecosystems are characterized by the fact that value is both created and captured in asymmetric ways, i.e. central actors seek rent from the other players. As lansati & Levien (2004) note, central actors also shape the ecosystem strongly, acting as hub

XY: I suppose one could look at the third type, the shared value ecosystems, that need a joint purpose and an understanding and may be built up on need without asymmetries, a tight coupling to a place or key actors or organizations<sup>19</sup>. In line with Bridoux and Stoelhorst, collaboration may be more efficient in creating value than market pricing alternatives, and in this case the designerly ways of thinking and doing can be highly useful in developing truly collaborative and cooperative environments and ways of working. I think there is a real opportunity to enhance knowledge on how design can contribute to the emergence of shared value ecosystems, both in business and social innovation contexts. Perhaps this knowledge can be also expanded and applied to other types of ecosystem contexts, where asymmetries exist in terms of capturing value.

AB: But where does design fit into the ecosystem discussion? While it is more or less straightforward to see the contributions that design makes to new products, services and even business models, it is not so clear how to create value with design to and in ecosystems, especially in situations which are not driven by a single entrepreneur, visionary or organization, and where there may not exist a strong history and path dependency in terms of locational advantages.

XY: Very much so. As you know, one of the difficulties in doing shared value ecosystem build-up projects in places like Egypt, Lebanon, Uganda, Tanzania, Chile, Mexico, the United Kingdom and north European contexts is related to the locality of the ecosystems. They all look different, they all work slightly differently, and they all operate under slightly different premises and leadership structures. It is very difficult to identify the mechanisms of shared value - this issue is a central one when we aim to create shared value ecosystems with business and social innovation aims. That noted, while we may not identify the shared value, could we maybe be able to create platforms that enable this value sharing, even when we do not really understand what is happening on the platform itself?

### **Design as a Platform**

AB: When things are fuzzy, design thinking offers approaches that help make the world understandable to others. Maybe we need to look back to Christopher Alexander when he talks of complexity being one of the great problems in (environmental) design. His focus on a pattern language in design (kind of a pattern recognition) is a way to 'search for some kind of harmony between two intangibles: a form which we have not yet designed and a context which we cannot properly describe'<sup>20</sup>. I would argue that is an early form of a platform, where individuals can create value between themselves, within the parameters set out in the platform "pattern". Typically, the platform owner does not, and perhaps cannot, know

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landlords, extracting as much value as possible from an ecosystem without integration; or they can try to become hub dominators (e.g. Apple) and control an ecosystem. Most organizations will operate as niche players with differentiated specialized capabilities.

<sup>19</sup> An example would be industry promotion organisations, start-up ecosystems, digital citizenship systems, to name a few, where central actors do not dominate.

<sup>20</sup> Christopher Alexander et al. (1977) *A Pattern Language: an early exercise of thinking as (design) patterns*, engaging also non-designers, useful when things are fuzzy, helping to make the world understandable.

exactly how the platforms are being used<sup>21</sup>. Evidently today we have shifted to predominantly digital versions.

XY: Yes, there is wide shift away from creating value in single transactions between people (sometimes called pipeline business) and towards platforms where value is created between those who operate (producers and consumers) on the platform, with a small part of benefits (monetary or otherwise) going to the platform creators (known as platform business)<sup>22</sup>. The very format of the platform encourages shared value creation - it also allows (at least theoretically) for equitable and meaningful distribution of assets and benefits. These design platforms also need to be understood as incubators of sustainable growth and innovation in the artificial world<sup>23</sup>. As Hatchuel notes<sup>24</sup>, design theory cannot be restricted only to problem solving, as it is only a moment in a design process, and economic growth and value creation may result from expandable design abilities.

AB: Is design now fast becoming a platform from which, and with which, to gather insights about an ecosystem? A useful platform to collaborate, communicate, understand and make sense of things as part of the process of creating shared value within and through the ecosystem itself? If we talk about design as a platform where a designerly way of knowing, thinking and acting exists, then are we in fact offering a space where stakeholders can create shared value - and a process in which thoughtful alignment (not management) and meaningful sharing (not transaction) are the capabilities needed. To paraphrase Nigel Cross, perhaps ecosystems have something to learn from design<sup>25</sup>.

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<sup>21</sup> That being said, big data and the current digital platforms do allow for significant tracing and tracking to happen. As Amrit Tiwana (2013) notes, platform ecosystems rely on thoughtful alignment of assets, and their evolution needs to be orchestrated, not managed.

<sup>22</sup> The key difference between pipe and platform business is linked to the distinct monetization strategies. With pipe business the consumers are directly charged for the value that is created. With platforms, producers and consumers transact (e.g. Airbnb, SitterCity, Etsy); one or both sides pay a transaction fee, and often one side is subsidized to participate. Producers create content to engage consumers (e.g. YouTube), and the platform may monetize consumer attention (through advertising). In some cases, platforms may license intellectual property usage. The key question is to figure out who creates value and who one charges for it.

<sup>23</sup> As Herbert Simon (1996) noted, economists need to have a good theory of design, proposing problem-solving as an entry point to a science of the artificial or a Science of Design (from decision-making to design theory).

<sup>24</sup> Hatchuel, A (2002) acknowledges Simon's shrewd revitalization of design (a subject largely neglected by economists). Simon maintained that design and creativity were special forms of problem solving while it is more likely that decision making and problem solving are restricted forms of design. Simon also had limited interest in the construction of social interaction which is a key resource of design processes. To paraphrase Hatchuel, unexpected designs of what something is can emerge from design platforms.

<sup>25</sup> Cross, Nigel (2001) Designerly ways of knowing: design discipline versus design science. *Design Issues*, 17(3) pp. 49–55.

## Platforms for Silent Designers

XY: Fine, if we think of platforms as new ways to manage within the inherent complexity of dynamic ecosystems in design innovation, and we see platforms as true revolution<sup>26</sup>, where industry boundaries will blur as platforms reshape industries into interconnected ecosystems, who will then operate on these new competitive playing fields?

AB: As there are simply not enough designers to populate all the design platforms (nor would it make sense to do that), perhaps we need to go back to Angela Dumas and Peter Gorb when they talked about Silent Design<sup>27</sup> as a design activity that goes on in organizations, but one which is not called design. It is carried out by individuals who are not called designers and who would not consider themselves to be designers. They also would not necessarily be aware that they are participating in a design activity. Maybe operating on platforms is about Silent Designers, the ones who are shaping the social structures of our society. But what would be the core shared value that would hold them together?

XY: I suppose we could go back even a bit further, to Victor Papanek: "All men [and women] are designers. All that we do, almost all the time, is design, for design is a basic to all human activity. The planning and patterning of any act towards a desired, foreseeable end constitutes the design process and attempting to separate design to make it a thing by itself works counter to the fact that design is the primary underlying matrix of life"<sup>28</sup>. This is the original call for the citizen designer, I suppose.

AB: Papanek also reminds us of the dark side of design in his *Design for the Real World*, saying that there are only a few professions more harmful than industrial design. He makes a point of linking design back to people, noting that one must engage in a socially and ecologically responsible way, to be radical and revolutionary. On another level, businesses often see humans as customers and consumers but not as humans. If they did, we would not have business models anchored in the consumer society, but in the shared value society and eventually a creator society. This is also an issue for platforms.

XY: What about Design for Good then? Just as there is a dark side, there is also the light one, where we can enable design platforms to support positive ecosystems of shared value, shared meaning and meaningful creating and sharing of value. After all, design is a shaping force, and as design platforms are open to all one can expect a range of approaches to

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<sup>26</sup> Daugherty, P (2015) *The Platform Revolution*. According to him, platforms are a new competitive playing field allowing for revolution and evolution: resting on the foundational ecosystem layer are the platform building blocks, rich in industry, future proof, with a service logic, and a two-sided network.

<sup>27</sup> Gorb, P., Dumas, A. (1987) Silent design. *Design Studies*, 8 (3) pp. 150-156. Dumas and Gorb draw attention to the Implications of how the scope and nature of 'silent design' could conflict and/or cooperate with formal design activity. Silent designers would generate further implications for the ecosystem and its stakeholders - the effect on the scope and nature of collaboration, cooperation, competition and conflict.

<sup>28</sup> Papanek, V. (1972, p.3.) *Design for the real world; human ecology and social change*. Chicago: Alchemy.



design emerge<sup>29</sup> and shape the world, mostly in piecemeal and organic approaches. In his patterns that define towns and communities, Christopher Alexander would see piecemeal as good!

AB: On a completely different level, we will also see artificial intelligence operating on these platforms (they already are in many ways) producing design solutions of sorts. It is a possibility that AI will undermine many aspects of design. But is this good or bad, and does it make designers fully redundant? Will the machinery learn the designerly ways? And how will they contribute to the creation of the unexpected and the new? Perhaps this will herald a new age of designer humbleness (today's designers are not often educated for that!). It may also be that even darker clouds are in the horizon. Whatever is coming, part of it will be unexpected.

### **Design and the Unexpected**

AB: An aspect of a design sensitivity and designer sensibility as human traits is how it connects to creativity, intuition, thoughtful alignment, being evocative and ultimately being human. People do not always use reason to make decisions<sup>30</sup>, not all problems can be solved rationally and not all opportunities can be identified methodically. There will always be space within platforms and ecosystems for emerging unexpected stories and new lateral solutions to messy problems and complex situations<sup>31</sup>.

XY: Management-led approaches seem to thrive on clarity and often view any lack of clarity as something that will lead to confusion. But there are other places that a lack of clarity can lead to: opportunity. How could design trigger more unforeseen opportunities and unexpected solutions from within platforms and ecosystems - things that could indirectly solve (complex) problems and create shared meaning and shared value? In the case of messy, problematic situations, Donald Schön talks about the application of reflective practice (by practitioners) to make sense of uncertainty in the search for an epistemology of practice, implicit in intuitive artistic processes.<sup>32</sup>

AB: Is this an opportunity for designers to engage and even create new tools and processes that trigger this more lateral and less precise way of problem-solving and opportunity-finding? De Bono and lateral thinking comes to mind, but going further, there could be a place for random chance as a process that could inform a much more dynamic application for design. An interesting example of this is Oblique Strategies, a set of cards which began life as a collaborative act of Brian Eno and Peter Schmidt. The strategies present themselves as questions that are intended to jog the mind and 'defeat creative block'. Their story is that they both discovered they were using similar processes to solve similar problems in their work. They both kept a set of basic working principles which guided them through moments of work pressure. This pressure of time tended to steer them away from the ways of thinking

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<sup>29</sup> This is well under way in social media platforms.

<sup>30</sup> Some would argue hardly ever.

<sup>31</sup> Which are all of the major interdisciplinary issues in the world today, such as pollution, security, welfare, poverty, health, and sustainability.

<sup>32</sup> Schön, D (1991) *The Reflective Practitioner: How Professionals Think in Action*. Farnham: Ashgate.

they found most productive when the pressure was off.<sup>33</sup> Brian Eno's reflective insights were that addressing problems head-on, in an obvious and rational way, is not always the best way to get results. The Oblique Strategies offered a 'set of possibilities' and a tangential way of addressing a problem that was, arguably, more interesting.

XY: For ecosystems and design, could this be a way to engage a non-rational (and non-linear) strategy to uncover unexpected possibilities? Are we in fact talking about how design could help us identify the opportunity in ambiguity, and could we view ecosystems and platforms therein as being filled with unexpected possibility? The key question may be linked to the ability to make systemic non-rational (and non-linear) sense of the situation to uncover unexpected opportunities. Perhaps this is a task for artificial design intelligence? Moving from random generation to generating from the seemingly random. Embracing ambiguity.

### **Ambiguity as a Resource for Design**

AB: Seen from this perspective, we could consider an ecosystem as being saturated in opportunities to compete, cooperate and collaborate in unexpected ways. They are dynamic and interdependent by nature, often incomplete and messy, and for particularly challenging ecosystems, mutual survival is certainly a shared value. The design platforms could help us to make sense of the ambiguity and bring the unknown unknowns of the future to the realm of the knowable.

XY: There are many examples of designers working in challenging and challenged environments with what just happens to be around them. For example, frugal innovation, working with waste, saving resources, essentially eliminating design. In many ways, the position of Margaret Bruce and John Bessant<sup>34</sup> of design linking creativity and innovation is still there. Creativity will always be needed, and innovation and design are converging in many ways, when design is increasingly done by people who do not have a traditional design education - innovation activities have been typically undertaken by a wide range of people in organizations.

AB: Designers work pretty well when faced with rather vague circumstances and incomplete information. A blank sheet of paper is not a scary encounter for a designer - it is an empty space (and platform of sorts) that holds the raw resource of unlimited potential. Situations that suffer from a lack of clarity can also hold latent possibility if one views things with an open mind-set. In *Ambiguity as a Resource for Design* (Gaver, Beaver and Benford 2003) present ambiguity as a resource that can be used to encourage close personal engagement with systems.<sup>35</sup> Ambiguity is not a problem, but an opportunity - intriguing, mysterious, and even delightful. By having people themselves interpret situations for themselves, they are made to grapple with systems and their contexts, creating a personal linkages and

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<sup>33</sup> Eno, B., Schmidt, P. (1979) *Oblique Strategies*  
[www.rtqe.net/ObliqueStrategies/OSintro.html](http://www.rtqe.net/ObliqueStrategies/OSintro.html)

<sup>34</sup> Bruce, M., Bessant, J. (2002) *Design in Business*. Harlow: Pearson.

<sup>35</sup> Gaver, B., Beaver, J. and Benford, S. (2003) *Ambiguity as a Resource for Design*. CHI 2003.

meaning.<sup>36</sup> Similarly, Aoki and Woodruff refer to making space for stories and identify the importance of ambiguity as an important resource for resolving social difficulties, specifically in the context of personal communication systems and face-to-face social interaction.<sup>37</sup> They also recognise that social relationships evolve and change.

XY: For ecosystems, does that infer that as people collaborate and create shared value within and across organisations, through design or otherwise, they get to know each other better and the relationship evolves out of ambiguity? This presents another dark side of collaboration pointed out by Cross, Rebele and Grant: that the people regarded by colleagues as the best information sources and most desirable collaborators have the lowest engagement and career satisfaction scores. They refer to this as being in demand yet disengaged.<sup>38</sup>

AB: So, if designers are too good at collaborating, it just might create another set of problems for them?

XY: Maybe designers need to learn how to move away from collaborating with colleagues who keep telling them how great they are, while possibly taking advantage of them and their desire to do good. You know, be aware of intentions behind agendas and evolve how they work in the face of apparent success.

### **Design for Evolvability**

AB: Ecosystems will change, people and places will evolve, platforms will be used for testing ideas and, inevitably, meaning and shared value may change in the face of shifting relationships and circumstances. This is of course completely normal and it is what keeps localities dynamic as they adapt and evolve. If we want ecosystems to be meaningful systems of shared value creation, then we must let the meaning and shared value of the ecosystem be free to evolve - outside of any business agenda for a clearly defined value-creation strategy. This does not mean that the shared value would not allow business organisations to do well, just as it would have individual people, ecosystems and society at large benefit, it just means that single agendas will not create meaningful innovations.

XY: Are we thus saying that the glue that makes it all stay together is evolvability? As I understand it, Design for Evolvability (DfE) is about designing evolvability into a system, and just like ecosystems thinking, it has deep roots in biological and social sciences. If we wish to enable evolution in man-made systems, we must design these systems to allow for the evolution to happen. In today's world, we tend to design static solutions that may fill the needs today, but require extensive resource inputs to make them adequate for the world of tomorrow. That's a bit silly in many ways, especially as there is intelligence embedded in

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<sup>36</sup> They present three categories of ambiguity: ambiguity of information finds its source in the artefact itself, ambiguity of context in the sociocultural discourses that are used to interpret it, and ambiguity of relationship in the interpretative and evaluative stance of the individual.

<sup>37</sup> Aoki, P. and Woodruff, A. (2005) Making Space for Stories: Ambiguity in the Design of Personal Communication Systems. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. pp 181-190.

<sup>38</sup> Collaboration Overload (2016) Cross, R., Rebele, R., Grant, G. Harvard Business Review Jan-Feb 2016.

the system. It is recognised that value in the future is driven by intelligent technologies, and we are still designing static systems.

AB: Yes, the concept has been borrowed from the original domain of real-time software architecture and design in complex systems, addressing the capacity of a system for adaptive evolution.<sup>39</sup> Systems exhibit the need to evolve and therefore we should be designing and testing for evolvability, building them with an eye towards being amenable to future extensions and modifications; this requires both effort and resources. If the system itself does not have the needed evolvability, this adjustment, growth and adaptation becomes very difficult and future proofing impossible. Another matter are the legacy systems that exist today - somehow we have to also think about the evolvability of legacy systems. Should we strive to retrofit evolutionary capabilities?

XY: This would mean that we would have to move from foresight to forethought; from the intelligent system to the unexpected system; from holistic to piecemeal; and from design thinking to design platforming (design patterning). In a way, moving from trying to see into the future into actively creating it. This does have implications in terms of how we think and do, and it requires a firm belief that we can shape our future in ways which create shared value. And on another level, we should move from sense-making to sense-creating and from recontextualising facts to factualising concepts. Besides design professionals, this evidently needs to involve silent designers in the search of shared value.

### **Why is this interesting?**

AB: I believe it's the evolvability that is the driver of innovation at the end. When we started our chat on collaboration we were imagining that it is the shared value that is the ultimate reason why we want do things together. It is an important reason, no doubt, but at the end it is the ambiguity that drives evolution, and shared value is the result of the unexpected solutions emerging from ambiguity. And the unexpected are those opportunities that cannot be found or identified through linear, rational models. We need the ambiguity, we feed on it.

XY: Are you then suggesting that we will not develop beyond the current paradigms unless we really embrace the idea of evolvability? Seems to me we are in loop where designers act on many layers and positions, driving the engine of ambiguity? We know that ecosystems are a major source of innovation (business and social innovation) and design platforms contribute to shared value ecosystems. What is unexpected in this is that we argue that the

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<sup>39</sup> Some definitions of evolvability include Percivall (1994): 'A trait of a system that allows the system to be easily modified due to changes in the environment'; Rowe and Leaney (1997): 'A system's ability to withstand changes in its requirements, environment and implementation technologies'; and Christian III (2004): 'The capacity of a system to successfully adapt to changing requirements throughout its lifecycle without compromising architectural integrity. Furthermore, an evolvable system must meet the new needs of the customer in a more cost effective manner than developing a new system'.

silent designers are important as they help to create the unexpected. Which ends up being the truly valuable piece in the puzzle.

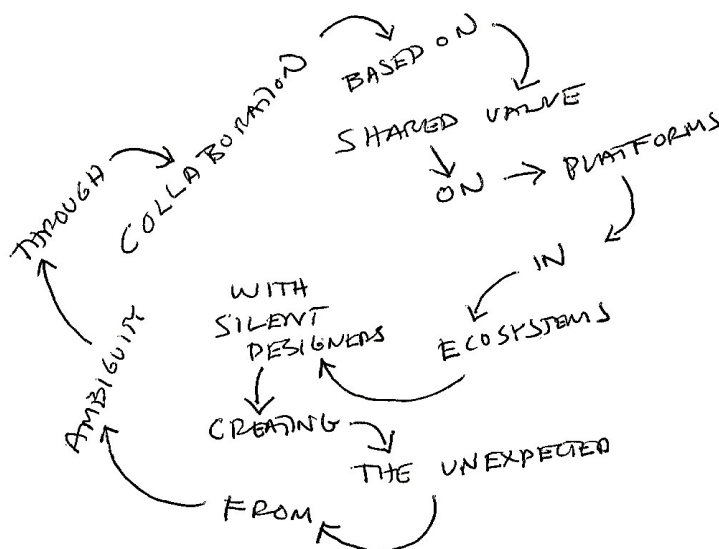


FIG.1 The cycle of evolvability

AB: Locality is important also, how an ecosystem develops and where it is – it is not a blank page – it is dynamic, a complex system with context shifts and shifting content created holistically and piecemeal. System evolvability is therefore connected to thoughtful alignment, not management. System evolvability is also the dynamic that powers the ongoing process, and keeps it in motion. Human ecosystems are dynamic and intelligent, but they are also inherently unstable and can disappear and be replaced by other ecosystems.

XY: Does this then mean that when we are looking at what comes after product, service and business design, we should look at evolvability? As I read it, we would then be concerned at the skills and abilities of creating concepts from ambiguity? This could mean a mix of products, services or operational and business models, operating or being prototyped on platforms in ecosystems? They could be tangible or intangible and they would have to create shared value on multiple levels and in multiple areas.

AB: Yes, and the key ability for the designer of the future is to ensure the evolvability. What this means in practice is the skill that one needs to develop are around, for example, thoughtful alignment (and not so much management) and thoughtful leadership<sup>40</sup> (as opposed to thought leadership).

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<sup>40</sup> According to Cathy Higgins and David Kreisher (Higgins Kreisher and Associates), the high degree of mental and emotional agility demonstrated by thoughtful leaders helps their organizations respond to extremely dynamic situations.

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