Collaborating for Collective Value: a Mentoring Perspective

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Abstract

Innovation today is seen to be driven by the cooperation between individuals in innovation ecosystems, but significant inertia, sub-optimal structures and understanding of how and why collaboration is practiced in many cases blocks innovation. In this conceptual and exploratory paper we argue that achieving high value added innovation requires mentored transitions through which low value market pricing relational models are replaced by communal sharing ones that enable high joint value creation. Through relational models and stakeholder theory and three illustrative case studies, we propose that design thinking methods can support these mentored transitions through the development of individual and social capabilities, enabling integrating, translating and expanding roles in the mentoring process. The paper contributes to the knowledge and application of relational models in innovation ecosystems through the mentoring perspective and the application of design thinking in developing high value added innovations.
Relevance to innovation The paper contributes to creating high value added innovation through the knowledge and application of relational models and stakeholder theory in innovation ecosystems. The mentoring perspective is a valuable conceptual addition to emerging innovation management practices. The application of design thinking in this context contributes not only to the methodological toolkit needed to create high value added innovations, but also the development of skills and roles for the 21st century mindset.

Keywords. Collaboration, Design Thinking, Innovation Ecosystems, Relational Models, Stakeholder Theory

Introduction

Currently popular management visions of agile, silo-breaking organisations have painted a picture of a more effective, creative economy - one better equipped to address complex challenges and to produce innovations of deep societal value. As both public and private

organisations move away from traditional single actor or entrepreneur[1] driven transactions into collaborative work and shared value creation in ecosystems, proposals have been made that the established logic inherent in programmes, interventions, organisational processes and relational positions between stakeholders is also changing. Work within shifting organisational settings and collaboration between individuals is seen to be replacing stand-alone interventions as the core model for turning inventions into successful and useful innovations - ones that create (or are expected to create) significant shared value for the set of participants. We would like to be witnessing such collective sense-making and solution-seeking leading the way towards multi-stakeholder collaborations in thriving innovation ecosystems, creating shared value on a broad societal or global scale. And we do note that an increasing number of actors (individuals and organisations) take the collaborative proposition seriously: silo-breaking and agile collaboration aim toward collective value creation and the discovery of qualitatively better solutions for all. This perceptual shift is associated to a conceptual change, the gradual reconfiguration of organisational and functional boundaries, of the relations between 'us' and 'them', and of the role an organisation or a project should play in a larger scheme of things.

However, in practice we keep encountering examples of confusing organisational change processes, extensive amounts of varied, but shallow interactions, and new market products and services that do not address critical social, economic and environmental challenges and fail to generate truly meaningful knowledge exchanges between participants. The problem is that while the language of management and of emerging organisational practices emphasises collaboration, co-creation and the building of shared value, the activities themselves are often implemented in a context driven by the same old drivers: competition, quick wins, networking, deal-making (devising simplistic win-win strategies), tit-for-tat rules, etc, all in service of predefined organisational performance indicators. It could be argued that in large part current collaborative management approaches are actually an extension of traditional self-interested organisational practice, only applied to an environment of rapid changes and high transaction levels.

The difference between innovation talk and practice has not gone unnoticed, and extensive attention has been paid to advocating the value of collaboration and exploring ways to shift transactional practices toward collaborative ones. Perhaps the best known example over the last decade has been the spread of design thinking in management, building on co-creation practices to join technological, economic and human factors into a mix that aims to generate breakthrough solutions based on shared value and shared knowledge. Another line of enquiry, economic stakeholder theory and relational theory provide a useful perspective on the conceptual shift entailed by this increased focus on collaborative work. Findings point to the importance of relations between stakeholders as important underlying drivers of individuals' participation in joint value creation, thus either helping or limiting the extent to which collective value can be achieved through cooperation. In particular, the recent research of Bridoux and Stoelhorst (2016)explores how the creation of joint value in organisations is affected by the relational styles these organisations advocate. This approach identifies implicit conceptual frames through

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[1]If we think about the early Schumpeterian definitions of innovation, the driver was the entrepreneur. Today, most often organisations drive innovation (Schumpeter, 1983).

which individuals perceive their relations to each other, and links the application of these frames to organisations' ability to solve public good dilemmas.

This lacking depth in collaboration translates in a limited ability of stakeholders in innovation ecosystems to meaningfully contribute to collective value, and thus to reach the breakthrough results they set out to achieve. Bridoux and Stoelhorst (2016) define joint value creation as "value creation processes involving multiple parties, within and/or across the firm's boundaries, who face high task and outcome interdependence in providing mutually supportive contributions to value creation". Two main contributing factors emerge: In the first place, ecosystem environments are premised on a market transaction model, which limits inclusivity on a larger scale. Secondly, the collaborative capabilities and practices of participants are often lacking. In this paper we focus on the latter theme, asking ourselves: *how can we apply the theory of relational models to collaboration in innovation ecosystems, and how can we foster the needed relational capabilities in practice?*

We initially build upon the behavioral stakeholder theory and relational model of Bridoux and Stoelhorst, recognizing that collaborative models of interaction are more effective at generating joint value than purely transactional models. We then examine innovation ecosystems as the wide systems within which collaboration is currently understood to takes place. They are defined by Autio and Thomas (2014, p. 205) as "a network of interconnected organizations, connected to a focal firm or a platform, that incorporates both production and use side participants and creates and appropriates value through innovation." These complex networks of interdependent actors, business enterprises, knowledge creators, not-for-profits and public sector agents form the foundational layers on which single organisations operate in various roles. We proceed to discuss design thinking as an approach that can assist in bridging the gap from transactional models to collaborative ones, with a focus on a mentoring strategy of enhancing individual and social capabilities and of mediating between the relational models used by actors in ecosystems. Finally, we take a preliminary look at the influence of relational models through three recent short illustrative case examples, in which a reorganisation of stakeholder positions and collaborative practices has been attempted.

In this conceptual and exploratory paper we contribute to the discussion on what is referred to as a collaborative 21st century mindset. We provide an initial contextualization of the relational models proposed by Bridoux and Stoelhorst, exploring the relevance of relational model change from market transaction to collaborative framings in innovation ecosystems. We continue by charting the opportunities that design thinking approaches, tools and methods can have in supporting this change in practice.

Relational models in stakeholder theory

In this paper we draw from Bridoux and Stoelhorst's analysis of relational models in order to focus our attention on the often lacking quality of collaboration and shared value creation, asking whether these might be improved through a reframing of stakeholder relations. The perspective is especially interesting when we seek to understand why collaborative, co-creative, cooperative practices often fail to succeed even though their

value may be recognized.

Building on Fiske's relational models theory (Fiske, 2012), Bridoux and Stoelhorst present four distinct models to describe how individuals relate to each other in collaborative environments. These four models are presented as generic, often implicit frames according to which individuals make sense of their relations to others, and based on which they assume certain ground rules related to cooperation, motivation and decision-making.

In Communal Sharing (CS), actors see themselves and others as members of a community and as participants contributing to shared motivations and goals. They cooperate by pitching in whenever required, regardless of personal rewards. Decisions are preferably made by consensus, and resources divided based on need.

Authority Ranking (AR) describes contexts in which individuals are defined by their position in a hierarchy. Those in a superior position are expected to rest on a legitimate source of power, providing security and acting on behalf of those in a subordinate position. Decision-making is based on authority and resources and value created are divided according to status, with those in subordinate positions receiving less.

In Equality Matching (EM), actors perceive themselves to be in a reciprocal situation, in which each party is equal and contributions are expected to be balanced between participants. Fairness is portrayed in terms of equality, reciprocity and tit-for-tat types of rules.

The fourth model, Market Pricing (MP) portrays actors as they are most often viewed in economic contexts, as independent entities competing for achievement and motivated by self-interest. Their engagement with each other is transactional. Decisions are made individually and fairness is understood as the equitable distribution of resources to actors based on their contributions.

As we can see from Figure 1, the four relational models represent different joint value creation potential and degree of collaborative engagement. The three models of AR, EM and CS are collaborative ones, while the MP is an individual model. As Bridoux and Stoelhorst suggest, people's interpretation of what constitutes appropriate behaviour and which norms ought to be respected in interpersonal exchanges vary from one model of stakeholder relationships to the other. Expectations toward other people and motivations to contribute to joint value creation differ significantly across the four models. Some of them are more likely than others to lead to shared value creation, with the CS model channeling the most, and the MP model the least in joint contributions.

Another important aspect of stakeholder relationship models is that they are only vaguely recognised conceptual schemes. Unlike organisational roles or functions, they are often implicit and not articulated openly in stakeholder networks or within organisations. People may have different understandings about which model is predominant in which situation, and due to habit, organisational history or personal preference, individuals may have a tendency to interpret relational scenarios in terms of some of these models rather than others (Bridoux and Stoelhorst, 2016 and 2014, Fehr and Fischbacher 2002). Switching from one relational model to another - and thus profoundly altering the way a collaborative situation is perceived - is possible but requires significant adjustments.[2]

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[2]Bridoux and Stoelhorst argue that all individuals are capable of acting according to all four models although they are predisposed to use some models over others.
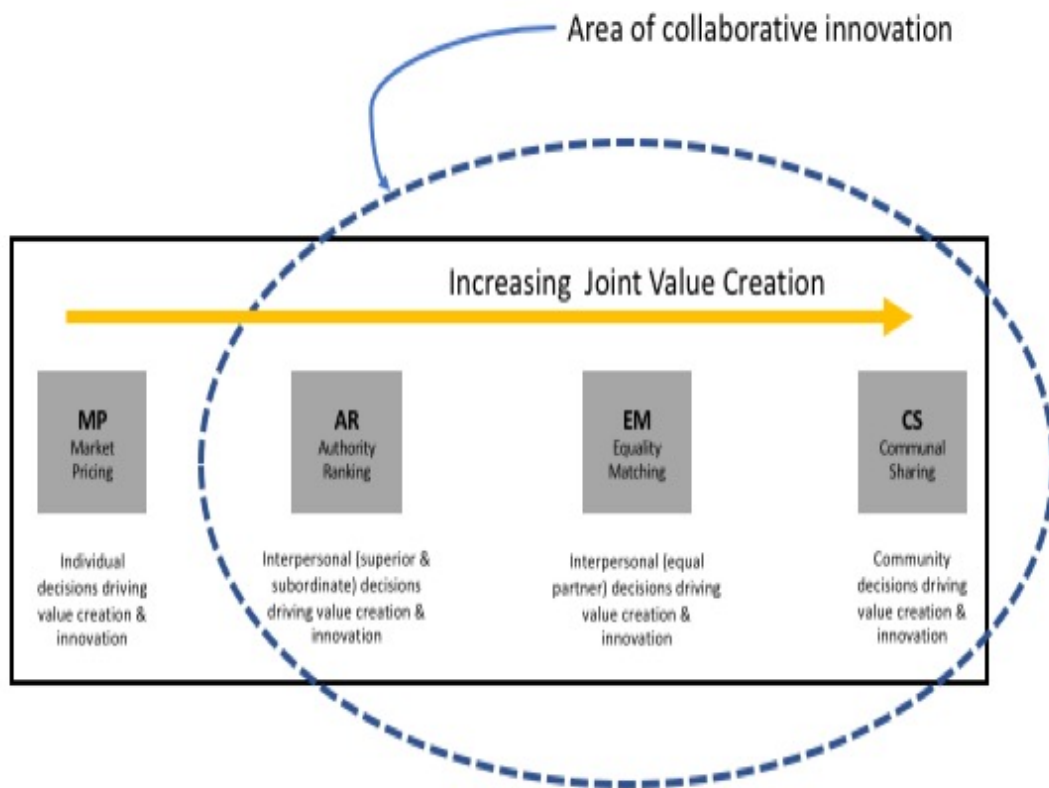
Figure 1. Joint Value Creation

Often this involves more than a simple choice, rather a reinterpretation of the entire context, and sometimes a complete reframing of the purpose of the organisation and its relation to the surrounding stakeholders.

Beside cultural factors (established assumptions and practice), influential individuals have a critical role in communicating the dominant relational attitudes within organisations and networks..[3] Though they are usually only tacitly communicated, relational models are often ingrained in organisations and other collectives. They affect behaviours, expectations, motivations and conceptualisations of value in the context of the organisation and of its stakeholders. Because each relational model encompasses its own logic of action and its principles for fairness, clashes between people's perceptions of which model ought to be applied in which context often become visible in the form of conflicts over what is considered right, fair or valuable. In cases where the parties do not perceive a situation in terms of the same relational model, this collision between basic assumptions governing action, motivation and expectations can be highly problematic and effectively impede meaningful cooperation.

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[3] In the presence of both cooperative and self-interested subjects, subtle institutional details relayed by the organisation may cause large behavioural effects (Fehr and Fischbacher, 2002).

Because relational models are associated to different fairness principles, the legitimacy of an organisation's approach, purpose or culture depends on whether its stakeholders approve of the dominant relational model as a basis for action and share a similar understanding of the relational context in which it operates. Bridoux and Stoelhorst argue that in cases where stakeholders find that an organisation is using a different relational model than the one they themselves would use, the mismatch is experienced as a disturbing transgression. In such situations, the stakeholders would either adjust to the organisation's relational model or seek to disconnect themselves from the organisation. They also suggest that in order to avoid negative emotions associated with conflicts between relational models, it is more likely that over time stakeholders will switch to an MP model (which can accommodate self-interested behaviour, unlike the other models) rather than from MP to CS/AR/EM. This in other words signals that moving an organisation or cooperative situation from MP to other relational models, which would better support joint value creation, is a demanding exercise.

Innovation ecosystems and shared value

Relational models do not exist in a vacuum. The concept of innovation ecosystems refers to constellations of actors who build on each others' activities in ways that help sustain the group as a whole, and lay the basis for the development and dissemination of new products and services - and this interaction is the basis of the relational models. The concept of innovation ecosystems is widely used with slightly different meanings, in essence it builds on the analogy from biological ecosystems: both are portrayed as dynamic and evolving, engaging a multitude of actors in multiple layers of intersecting transactions. While ecosystems are collectives with somewhat unclear boundaries, they are defined in terms of the benefits they provide to their participants. Often this implies a symbiotic relationship, where one both gives and gets valuable assets. While ecosystems can appear stable for long periods, their actors also have to be able to adapt, evolve, produce value, and be robust to accommodate sudden changes.[4] Moore[5] notes, there are identifiable phases in the growth, maturity, and restructuring of ecosystems, and sometimes entire systems disappear when external or internal shocks disturb the system past a tipping point.

An underlying difference between the notion of an ecosystem and various notions of social/societal collectives, is that ecosystem actors are portrayed as mostly disinterested in the system as a whole - they have individual, not collective aims, and pursue private gains by adjusting to their environment, but not aligning themselves with it. In this sense ecosystem actors form their private notions of value and associate themselves to other actors based on individual or shared interests. The default notion of individual action and motivation in economic theory takes self-interested transactions (as in the MP Market Pricing model) as a point of departure to explain human interactions in economic ecosystems.

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[4]See e.g. Moore (1993), Iansiti & Levian (2004a.

[5]James Moore was an early proponent of the business ecosystem thinking in his 1996 work The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems.

As Bridoux and Stoelhorst note, a majority of individuals however have tendencies and preferences to (sometimes) use other relational models (CS, AR, EM) when interacting with other people. When applied to (economic) ecosystems, this suggestion calls into question their conceptualisation exclusively as groupings of actors disinterested in the system as a whole. Indeed, in comparison with biological models, ecosystem concepts referring to intentional human activity portray participants as more self-aware and purposeful regarding their actions and the functioning of the system. As the rhetoric of collaboration and co-creation becomes widespread, we can assume that some or many of the participants increasingly adopt a CS, AR or EM model to their participation in the system. As a consequence, notions of collective value arise, and the difference between an economic ecosystem and a social collective begins to blur.

One of these differences relates to the organisation and governance of the system. Governing mechanisms are created when actors perceive that the viability of the system as a whole requires facilitation. An established perspective on the difference between a market system and a societal entity is that the former is assumed to operate as an ecosystem of independent actors (oriented along an MP frame), and the latter serves notions of a collective organisation (oriented along CS, AR or EM frames). Whereas the MP-modeled ecosystem is assumed to operate mostly on a transactional level (or auto-guided by an invisible hand), the other models postulate both the existence of public goods and the need to collaborate on action and decision-making related to those public goods.

The boundaries between minimally facilitated MP-framed innovation ecosystems and more organised innovation ecosystems leaning toward CS, AR and EM models are further blurred in the context of ecosystem platforms and facilitators. Innovation ecosystems (Autio and Thomas, 2014) are often created and maintained around platforms, be they a focal firm or other organisation. This means that there is often a focal point that the ecosystem wraps around.[6] Unlike industrial clusters, innovation and industry networks or industrial value chains, innovation ecosystems are inclusive of broader agendas and integrate both the perspective of production and the perspective of the users. Accordingly, the ecosystem view represents a shift toward a more holistic framing encompassing the needs and motivations of a wide range of actors, and directs perceptions closer to the relational CS, ER and EM models rather than the MP model alone.

Although innovation ecosystems might continue to align closely to the MP model, the shift in rhetoric toward especially CS and EM frames is noticeable in the terminology and methodologies currently exploding in popularity in management approaches: co-creation, collaboration, facilitation, enabling, shared value or collective impact, to name a few. This change in language reflects a conceptual shift in how private actors in a market system are portrayed and how the relations between them are framed. Since cooperation is strongly belief-dependent and sensitive to how other actors are interpreted to be framing the relational situation, individuals change their course of actions and expectations based on the relational model that is being hinted at (Fehr and Fischbacher, 2002). This can be

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[6]As examples, Teece (2007) and Adner & Kapoor (2010) focus on the firm in the locality, while Moore (1993,1996) and Iansiti & Levian (2004a,b) focus on the 'hub' firm, and Gower and Cusumano (2002) focus on technology platforms.

highly consequential, since a shift in relational models also induces shifts in expectations of shared value, of appropriate behaviour and of the perceived principles of fairness in the situation. In the case of innovation ecosystems, the increasing use of collaborative concepts thus raises expectations of CS- and EM -type behaviour, which still often clashes with widespread MP- and AR- type organisational practices. The ensuing confusion poses a significant challenge to emerging cooperative initiatives, and highlights the need to develop both new organisational approaches to collaboration as well as the skills and capabilities required to bridge the gaps between clashing relational models.

In this changing market landscape, public and private organisations and to an increasing extent individuals are testing these collaborative notions in practice, raising questions on what are the skills and attitudes needed to collaborate in these new ecosystems, and how they could be developed successfully. In the next section, we propose that addressing the question of underlying relational models is key to making progress in this area.

Enabling relational shifts: a mentoring approach

As innovation work becomes increasingly framed in terms of ecosystem activities, the value creation needs of organisations become more complex and comprehensive. Concurrently actors need to have the abilities to create value for users, customers and clients, as well as internal stakeholders and partners, the ecosystem and society at large.[7] They also need to master roles that enable them to do this.

In collaboration, people, ideas, and experiences meet and collide. An encounter of actors always produces some change or variation - a difference.[8] This difference is the important contribution in collaboration - it allows us to create the new, revise the old and see things from new perspectives - in other words it powers one key component of innovation, novelty.[9] While these encounters and their promise of novelty are appreciated, in practice actors in ecosystems often fail to genuinely build upon common ground. As discussed above, the ability of stakeholders to meaningfully contribute to collective value or to participate in its definition often remains limited. As ecosystem environments are usually premised on an MP model and thus not designed to function as decision-making collectives, there are numerous organisational, institutional or systemic barriers to participation and no established principle to ensure equity of participation. On the other hand, among those who do participate in collaborative ecosystem activities, we find numerous individual and practical limitations to effective participation.

In order to address the latter issue (the topic of this paper), we focus on the role of enablers - individuals, processes and organisations which take an active mentoring role in supporting others as they navigate across collaborative arrangements. We argue that this is not only a task consisting of managing complexity. It is also and perhaps most essentially a mediating role, alleviating confusion and conflicts arising from the

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[7] Den Ouden, E. (2011) builds up a case for multilevel and multi-area value creation in her Innovation Design: Creating Value for People, Organizations, and Society. Berlin:Springer.

[8] See e.g. Deleuze & Guattari (1994), on the concept of difference and affect.

[9] Innovation is seen to have the attributes of novelty, utility and success of some kind. A wide diffusion of ideas is as much a success as blockbuster sales.

collisions between relational models. Collective value creation depends on the alignment of stakeholders' motivational systems (Bridoux et al., 2011). Effective mediation addresses questions pertaining to the underlying relational models and creates opportunities to reconfigure the relational positions and motivational systems of stakeholders.

Under a general umbrella that we propose to call 'mentoring approaches', we take a preliminary look at what such a mentoring perspective could consist of: expanding the individual and social capabilities required to collaborate amidst such transitioning relational frameworks, as well as the tools, such as Design Thinking (DT), which can be applied to facilitate the development of these capabilities.

Capabilities

The fast developing global work environment calls for very different skills and abilities than those that were valued in past decades. Flexible, open-minded, self-managing talents are in high demand, leadership moves toward coaching rather than authoritarian styles, and collaboration relies increasingly on network-centric initiatives (Nambisan and Sawhney, 2011).

The profile of sought skills and abilities reflects the transition from innovation clusters to ecosystems described above. As the innovation environment becomes more holistic, more focused on the creation of shared value, and actors more reliant on each other, successful initiatives no longer emerge from the Market Pricing model alone. Breakthroughs are sought in areas where multiple actors and agendas collide, and the skills to navigate in this environment and to operate in and between several relational models become essential.

On an individual level we can identify basic abilities required when transitioning from an MP model of cooperation toward joint value -driven styles. Self-reflection and awareness are intangible, but critical underlying factors of personal effectiveness in an evolving open-ended work environment. We propose that being able to identify the key issues at hand, being able to reflect on the plurality of views and actions of stakeholders and their relationships, and to address issues through alternative normative perspectives are essential aspects of this capability. We also find that there is a need to proactively position oneself and to assess one's own role, potential and abilities in the context of action. Last but not least, it is important to build individual motivation, personal interest and preparedness to contribute to joint value creation.

On another level, we also note that successful operation in innovation ecosystems requires social competences. This is particularly important since, as discussed above, innovation ecosystems rarely have organised decision-making structures or equitable avenues for participation. Effectiveness is highly contingent on social capabilities, such as awareness-raising, negotiating outcomes and being able to influence other individuals, organizations and communities to take action. There is also a need to be able to partner and collaborate in mutually beneficial ways with multiple actors to achieve wider impact, and to acquire the necessary influence to participate in decision-making.[10]

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[10]We build on the work of Sen and his Capability Approach on individual capabilities, see e.g. Sen, A. (2000) Development as Freedom, and the work of Stewart on social capabilities (also referred to as relational capabilities at times), see e.g. Stewart, (2013). Additionally see Subra et al. (2017) for a wide

Collaboration skills are highly intangible, and while there is a plethora of advice and best practices on the development of personal or social competences, there is little understanding of the challenges posed by collaboration between colliding relational systems, and the skills required to mediate between these perspectives.

This bridge-building activity has become ubiquitous in emerging innovation ecosystems, and it is performed by stakeholders such as mentors, innovation platforms, or public services among others. Along the transition from innovation clusters to ecosystems, and the concurrent need to shift to relational models more suited to collaboration and shared value creation, the role of enablers comes in high demand.

Mentoring Roles

As innovation work evolves toward an ecosystem approach, the activities taking place in the system are increasingly perceived in terms of CS/EM/AR. This transition is taking place gradually in and between organisations, and it has given rise to numerous enabler roles.

This is particularly visible in cases where new collaborations need to be built. Much effort may be put into defining roles and responsibilities and agreeing on activities between stakeholders. Relational models on the other hand are rarely discussed upfront. They are more tacit, embedded in organisational cultures and practices and while they may be intuitively acknowledged, they are usually not part of established organisational concepts and discourse. Remaining thus underdefined, their influence on how the partners' roles are eventually performed and according to what logic of collaboration the stakeholders will tend to relate to each other can be insufficiently recognised.

As relational models remain thus underrecognized, individual contributions to broader shared goals can be reduced for motivational reasons, such as free-riding, insufficient incentives, feelings of unfairness and misaligned interests. Especially when faced with high task and outcome interdependence, some stakeholders will typically contribute to joint value creation, while others will pursue individual interests. This can quickly lead to an unraveling of collaborative efforts: if participants are unable to co-create value according to expectations, the high transaction costs of cooperation can no longer be justified.

In such cases the role of mediators can be decisive. We propose to consider these actors (facilitators, hubs, network nodes, services or coaches, to name just a few of the proliferating enabler roles) as central to the transitions between relational models applied by different stakeholders in innovation ecosystems. We highlight the role of mentoring as a decisive function in these transitions. Mentoring serves to integrate and translate between stakeholders and to expand the collaborative capabilities of partners. Crucially, such a mentoring approach assists partners in navigating between relational positions displayed by various counterparts and in reconfiguring those positions to reach better collaborative environments.

While evidently other mentoring roles also exist, we argue that the key functions of integrating, translating and expanding address the specific challenges of collaboration in

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discussion on framing the approaches, abilities and impact related to the development of youth as change agents.

innovation ecosystems. Integrating brings things together, translating helps to make sense of things and expanding creates the needed capabilities for improvement. Integrating is a complex task, as collaboration can be a transformative process that permanently alters not only the mutual activity, but the very nature of the players themselves (Hickey and Mohan, 2004). In the context of relational models it can be seen as the demanding task of reconfiguring a collective in which actors from various MP positions regroup as a relational unit, such as EM or CS. The translating function on the other hand assumes a deep understanding of both the global and local contexts in which the ecosystem operates, and involves facilitating and making sense of the knowledge and perspectives of stakeholders, helping to identify the most important issues that need to be communicated between actors. Finally expanding relates to the consolidation of synergies, skills and abilities through learning and longer-term development - a difficult task in an environment of fragmented and fast-paced initiatives.

Design Thinking

Design thinking methodologies can be viewed as mentoring tools that are increasingly used to support ecosystem building and shared value generation. DT builds on creativity, innovation and human factor thinking, fusing designerly and analytic methods to develop new product, service and business concepts and solutions.[11] It is not new - Nigel Cross talked of 'designerly ways' already well over three decades ago (Cross, 2001), and Donald Schon of reflective practice and creativity (Schon,1983). Along other reasons for its current popularity, we suggest that DT approaches, methods and tools can assist in transitions from an MP operating environment toward reciprocal relational models (CS/EM/AR).

The key contribution from DT to shared value creation in innovation ecosystems lies in the power it has to enable collaboration, cutting across functions, organizations and cultures - Beside its use as a group of technical tools to develop user-centered innovations, knowingly or unintentionally DT approaches can be viewed as serving to induce relational shifts toward more collaborative work environments and more extensive joint value creation. DT -based facilitation typically disrupts or reorganises a collaborative environment, thus first unlocking and then helping to reconfigure the relational positions between the stakeholders.

As an approach, DT is ambiguous, optimistic, and exploratory. It employs abductive reasoning and reflective practice, reframing multiple viewpoints in order to find alternative ways to approach challenges. Through the collaboration of interdisciplinary teams, developers engage in user-centric and design-driven innovation. DT methods aim to build a deep and empathetic understanding of the desirability of the innovation from a human and contextual perspective. DT's emphasis is on arriving at the most meaningful and valued solutions that can be found, by employing a sensitising, iterative approach, testing products, services, and business models through visualizations, prototypes and user engagement. This makes DT quite effective in balancing human desirability issues with technical feasibility and economic viability when developing new products, concepts or services.[12] DT is also future-oriented, as the concepts it helps to create over time

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[11] See e.g. Brown 2008, Dunne & Martin 2006, Lockwood 2010.
[12] See e.g. Johnson & Woodilla, 2009, 2010, Hassi & Laakso 2011.

become the products and services of the future.[13]

Design Thinking approaches have proliferated quickly in the past decade, and we can take this rapid diffusion as a signal of both success and utility. Innovation is in many cases surprising and unforeseeable. The concept of a rhizome[14] helps to illustrate environments in which DT approaches can be effective. In a rhizome, learning and the spread of ideas can be understood as analogous to widespread fungus roots underground, waiting for suitable conditions to grow the visible mushroom. By contrast, the static image of a tree, often employed to represent the growth of knowledge, cannot fully describe the dynamic configurations that emerge in innovation. Developments in social media, the arts, or the startup world can be named as just a few examples. Learning in such a continuously shifting environment requires immersion, learning by doing, learning by being and learning by living. A rhizome is everywhere, networked and 'underground', at times invisible and not readily understandable. We are only able to recreate the causalities afterwards, by joining the dots as we saw them in the past. Switching our conception of learning from the image of a tree to that of a rhizome has important implications for planning and leading innovation activities. It also leads us to acknowledge the complex inter-dependencies between stakeholders and thus to reevaluate the relational positions between them.

Towards best practice - case examples

In this section we examine three case studies with different configurations of existing relational models and desired ones, capturing also the maturity of the abilities of the actors and the clarity of the roles in the ecosystem. We also attempt a running commentary on the shared value created by the initiatives. In the first case, Mobile Ecosystem, starting from an initial authority ranking (AR) model, the project aims to achieve communal sharing (CS), to bring together a wide range of actors to the same table in a collaborative fashion to promote entrepreneurship. In this case the actors have well developed abilities and roles are also mostly clear. In the second case, Developer Park, the starting situation is based on a market pricing (MP) model and the desire is to move internally into a more communal sharing (CS) model, aiming to capture the creative energy of a community of developers. In this case the abilities to operate in ecosystems are also well developed and the roles are partly clear. In the last case, WASH Ecosystem, the initial situation is based on an equality matching (EM) model, and the aim is to develop toward the communal sharing (CS) model. In this case the abilities of the participants are not fully developed and the roles are somewhat unclear.

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[13]On a higher level, concepts are the means by which we move beyond experience so as to be able to think in new ways. They must be creative, active, and exploratory, rather than just being descriptive, reductionist (simplifying), or representative (Deleuze & Guattari, 1987, 1994).

[14]The idea of rhizome, according to Deleuze and Guattari (1987), describes the concurrent connections of the most similar and farthest away ideas, objects, people, and places. These apparently random and non-hierarchical connections and collisions map the processes of affect in networked, relational, and transversal thought, without being fixed to a construction of a linear and rigid structure.

Mobile ecosystem

In the case of building an innovation hub and a corresponding ecosystem in an east Mediterranean country, the very high level objectives were to promote the competitiveness of the whole society, while at the same time being concerned with lower level aims such as developing 21st century skills in schools. While this mobile communications oriented programme was driven initially top down in terms of the conceptualisation, it had aims to build on open innovation and crowdsourcing mechanisms, creating a balanced approach in the medium and long run.[15]. In order to address the initial credibility and trust issues, an external institutional facilitator.[16] was engaged to bring the parties together to think of the future.

The project had a focus initially on the mobile internet ecosystem (mobile apps), and was to involve innovation stakeholders such as universities, industry clusters, start-ups, microenterprises, incubators, angel investors, venture capitalists, and government. In other words a challenging palette of actors to place into the same collaborative space at any given time. Many of the commercial actors operated in a default market pricing (MP) relational model, and the institutional participants and the knowledge producers mostly in an authority ranking (AR) one. The aim was to move towards an operational model resembling communal sharing (CS) over time. As the initiative was driven top down by institutional participants, the stakeholders tended to perceive it in AR terms. This role of integrating the actors and in some cases expanding their abilities also involved a significant translating activity, as the operational environment was not fully conducive to collaborative effort and/or activities. It was not a question of lack of awareness, but of practice in collaboration - the key actors had often been educated in collaboration friendly places,[17] but were unable to put in place new practices within existing settings. The initial mentoring activities included workshopping and co-creation, creating a series of joint outputs that laid out the first steps for future collaborative hubs aiming to empower local entrepreneurs and create a lab for prototyping and experimentation.

In many ways, the relational aspects between the overall set of stakeholders were initially set in terms of the AR model, with the participating entrepreneurs subscribing to the market pricing model. It is foreseeable that moving toward a collaborative model of communal sharing will require both time and continuity in significant effort from the key public sector integrators. While the initial project managed to unlock the relational set-up between some of the actors, temporarily reconfiguring their thinking for the duration of the intervention, there is no firm evidence of a longer term reconfiguration. Thus also the longer term shared value creation remains unclear. Perhaps the key difficulty lies in the sheer number of collaborators - learning and practicing collaborative work is complex and from individual viewpoints the perceived value creation might be slow and insufficient. Design Thinking approaches, tools and methods were used throughout the early phase to discover, define, develop and deliver the initial outcomes.

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[15]The key challenges were linked to the low level of collaboration between public sector actors and entrepreneurs, with users and university actors mostly sidelined.

[16]An international development bank.

[17] Such as the Silicon Valley.

Developer Park

The science park in the North African country had been operating for a number of years, with a focus on providing high quality venues for global players engaged in call centre and remote ICT support business. While public funding had been used to develop the initial phases of the park, the operational model resembled real estate business to a great degree, as the park did not have an active engagement or equity holding role in the businesses of the tenants. When developing the strategy for the expansion of the park, the national authorities saw an opportunity to support the co-location of local ICT agglomerations, aiming to retain and develop further the local knowledge base and skills. This meant developing strategies and facilities to engage communities of local developers, early stage enterprises and SMEs, co-located with some larger anchor firms. In order to co-design the approach and strategy for the expansion of the park, an external facilitator was engaged,[18] and through a multi-party co-creation workshopping approach with stakeholders from government, private ICT actors, universities, and communities of local entrepreneurs and innovators were brought together.

The aim of the cross-functional working party was to examine the innovation ecosystem of the park and to develop a proposal for an innovation hub that would both complement the existing park facilities and create new types of interaction and collaboration across the co-located actors. The development work involved examining the services, infrastructure and business models, with consideration given to the support services and curated activities, the nature of the collaborative spaces, and community building with developers, entrepreneurs and local innovators. This essentially implied moving from an initial full market pricing (MP) relational model into a more collaborative one based on a mix of communal sharing (CS) for the smaller operators and MP for larger operators.[19] The key role of the leadership of the park, together with the external facilitator team, was to integrate the view and desires of the top down and bottom up actors. This was not entirely straightforward, as it involved working with the park operators and current tenants (the main actors) who operated on a MP model, and some university and research oriented players with an EM view of the situation, and with developers and innovators adhering to a CS model. The facilitator team found themselves engaged in a translating function between the top-down and bottom-up views, and in some cases bringing some of the participants up to speed through an expanding role. In many ways, the external facilitators engaged in multiple ways in mentoring activities including workshops and helping to co-create the next steps towards the future innovation hub.

The initiative focused on the front end of the development process, and thus only the initial steps have been made in the shift toward more collaborative ways of working and thinking. The participants were very aware of the benefits of shared value and collaboration, but also recognized the deep roots of a competitive MP mindset. This mindset was not seen to be entirely based on financial resources, as much of the transaction was seen to be based on exchanges of power and in-kind exchanges of favours. The participants were very well trained experts in their own fields, with highly developed

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[18] An international development bank.

[19] That being said, the larger operators were seen to benefit directly from the co-location and the CS mode in their dealings with the smaller participants.

individual and social abilities. That being said, the scarcity of resources over time has led to a serious partial optimization issue, where the larger whole does not get priority over one's own immediate mandate. Design Thinking was the key method used in the mentoring activities. Through a process of identifying the ecosystems elements, defining value opportunities, developing initial business models and testing the initial solutions, the participants co-created the series of potential solutions for further development.

WASH Ecosystem

The WASH Ecosystem case describes a challenging co-creation process encompassing various organisations partnering to support WASH innovations in East Africa. The partners in the project ranged from intergovernmental organisations to universities and both local and foreign enterprises. The aim of the project was to generate needs-based solutions to water and sanitation challenges faced by children in rural East Africa. The initiative was built around multi-disciplinary innovation courses, in which university students approached the WASH challenges with the help of development practitioners and private sector specialists, in close collaboration with the school children themselves. The approach combined human-centered design with human rights based methodology, in an effort to bring a fresh collaborative perspective to persistent development challenges, and to ensure the solutions would first and foremost address the needs and interests of school children.

The initiative was a first of its kind for the partners involved, and the collaborative abilities of many of the stakeholders (including young students) were only being developed at the time of implementation. Premised on the idea that each partner had an important piece of the puzzle to contribute, the project laid out a collaborative framework that connected the work of the participating organisations on an equal level (EM). The partners depended on each other to complement their work and to generate a more thorough picture of the innovation context. While in principle the complementarities were evident and the partners were motivated to collaborate, they immediately faced numerous coordination obstacles: physical distances, conflicting schedules and logistical challenges. Another level of difficulty related to significant differences in organisational cultures. While the initiative had been launched under a conceptual scheme approved by all, the collaborative principles of the project were interpreted differently by representatives of separate organisations. Under the guise of imprecise terms such as 'co-creation', several operational strategies were eventually undertaken by the various partners.

As the project included a strong focus on learning, it comprised significant levels of mentoring activities and training aiming at expanding the capabilities of all participants. The project was conceived according to DT practices, also emphasising a normative human rights perspective and the equality of all stakeholders. The activities were aiming for human-centered innovations, which meant employing DT tools and attempting to translate between multiple areas of knowledge. The project was set up in an integrative framework, openly seeking to build shared value and to promote a CS configuration between the partners. This was however very challenging in practice, as the heavy coordination load pushed the interaction closer to a mix of an AR model (in the coordination of activities) and an EM configuration (between the equal, but often disconnected partners). The

project involved multiple layers of collaboration and parallel activities, and while the roles of partners had been defined, the principles of interaction between the stakeholders were difficult to grasp for many participants. Where some saw the activities in terms of a CS model, others referred to EM and AR models. As predicted by relational model theory, the confusion brought about by the clash between relational expectations undermined many of the activities, leading to misinterpretations, conflicts and at times disengagement of individual stakeholders.[20] The project was noteworthy as one which didn't engage along an MP model with any of the partners. This allowed for shared value creation to be accepted as the overarching aim by all participants, and to lay the basis for in-depth collaboration and high levels of dependency and buy-in between partners. On the other hand it exemplified the need to mediate clearly between EM, AR and CS, in order to create a harmonious environment for such joint value collaboration to reach its potential.

Conclusions

In this exploratory paper we initially recognized the difference between the desired new ways of collaboration, networking and sharing and the reality on the ground of the prevalence of sub-optimal organisational arrangements, ways of working and failures to engage with other players. We noted that this dichotomy has not gone unnoticed, and that an important aspect of the challenge can be seen as arising from underlying conflicting relational positions between stakeholders. We built upon findings from relational theory, where the case has been made that contributions to joint value can be increased when transitioning from a market pricing (MP) relational model toward the communal sharing (CS) one. Based on the work of Bridoux and Stoelhorst, we argued that CS, AR and EM models of interaction are more effective when seeking to contribute to public goods and create joint value. This was highlighted as relevant also in the context of innovation ecosystems, understood as networks of interconnected organizations that create and appropriate value through innovation involving both production and participants from the user side.

Through short illustrative case examples, we examined recent international initiatives in which such a reorganisation of stakeholder positions and collaborative practices has been attempted. We observe that individual capabilities and social competence are needed at a minimal level. The integrating, translating and expanding roles of the actors can be identified in all case examples, and play a significant role in the transition of MP models to CS ones and in avoiding disruptions and conflicts caused by unstable relational frames. As a general observation, the case studies also demonstrated clearly the need to consider the length of time that any intervention would take, as short interventions may not create lasting changes.

In Figure 2 we have sketched out the relationships between relational models, joint value creation and mentored transitions. The highest possible value added area is

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[20]This challenge reflects the findings of Bridoux and Stoelhorst (2014), suggesting that inconsistencies in organisations' relational treatment of stakeholders are more detrimental to value creation than the stable application of any chosen relational approach.
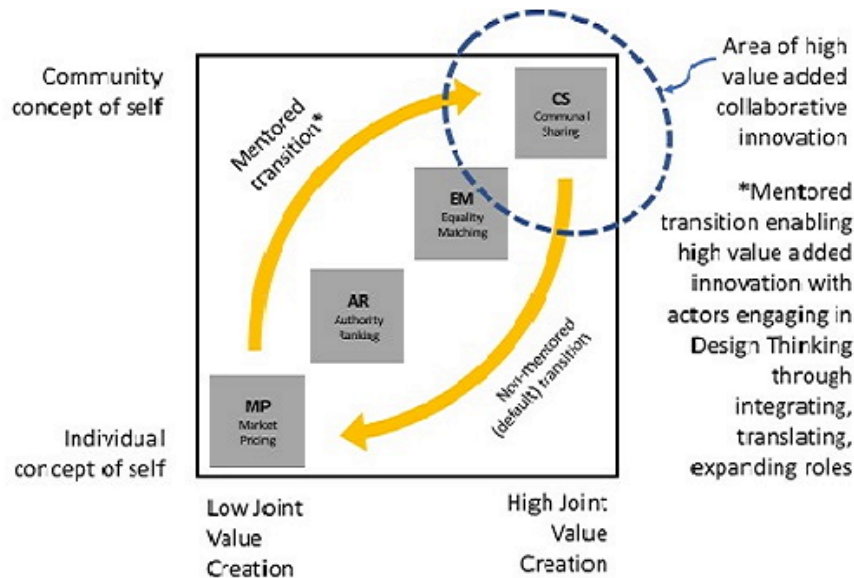
Figure 2. Mentored Transitisions

important in terms of innovation, as it is noted that, while AR and EM models are collaborative, they do not have the same high value additions potential as CS.

It is also noted that transitions also happen from collaborative models back to market pricing one, and thus the potential for high value added innovation is potentially lost. This implies that maintaining the potential of the CS model requires active collaboration it itself.

In terms of future research, there is ample space to investigate further the models themselves, their prevalence, specific nature and dynamic interplay. The transition phases, the key influencing factors and their interplay, together with the reverse potential of falling out of collaborative models are clearly also open for further examination.

Acknowledgements

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