Concepts for Co-Creating Innovations in the EIP

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Abstract: There is growing recognition in rural development of the importance of lively interaction between farmers, researchers, policy makers, value chain actors, consumers and other stakeholders. Whilst in the past innovations were expected to flow from researchers to farmers as end users, new and sustainable solutions are now progressively viewed as emerging from joint learning processes. As Mrs. van Oost (EU/DG-ARD) states: The innovation model under the agricultural European Innovation Partnership programme (EIP) goes far beyond speeding up transfer from laboratory to practice through diffusion of new scientific knowledge (referred to as a "linear innovation model"). The EIP adheres to the "interactive innovation model" which focuses on forming partnerships - using bottom-up approaches and linking farmers, advisors, researchers, businesses, and other actors in Operational Groups. (Van Oost 2012).

Such lively interaction does not occur spontaneously, especially not under harsh competitive market conditions. It takes deliberate effort, for which space should be created. My view is that the concepts and language associated with the technology transfer approach are insufficient to describe what really matters in processes of co-creation processes. This is also true for the vocabulary associated with the neo-liberal market approach. Take for example the concept of the "knowledge broker" who, in the strictest sense, merely brings suppliers and clients together. Creative processes require more than that. These vocabularies may blind us to certain elements crucial to understanding why some networks become creative whilst others do not.

Three concepts will be highlighted which, in my experience, appear to be useful in the understanding and stimulation of co-creation in networks: [1] Vital Space: this is the space in a network in which people feel the freedom to contribute what they enjoy doing in connection to others. Here they feel recognised and useful, and there is curiosity, enthusiasm and creativity. [2] Free Actors: these are the people or actors who do whatever is needed to create vital space in a network, whether they are mandated to do so or not. No network can function well without a free actor. [3] Responsive Capacity: this is the capacity of a network or system to generate effective responses to changes and challenges. Enhancing this capacity is the ultimate justification for free actors to intervene.

This article is based on research the author reported about previously (Wielinga 2001; Wielinga et al. 2008, 2009, 2010; Faber and Wielinga 2011), and aims to contribute to the current discourse on approaches that could be helpful for projects under the EIP.

Keywords: knowledge systems, networks, co-creation, facilitation, knowledge brokers

Knowledge Brokers, Intermediates, Facilitators, Champions, Free Actors, or …?

Who takes the lead in forging partnerships?
The search is on for real partnerships. Farmers are not just end-users of scientific knowledge or customers buying knowledge products from advisors as salesmen. Practical innovations emerge from interaction between different actors, each contributing their knowledge, experience, means and networks. However, such interaction processes between people with various interests, language and habits are not easy to manage. At present, the incentive structures for farmers, researchers, commercial advisors and policy makers differ considerably, and once people from these different worlds find each other, they have to row upstream to get things done. The EIP programme of the European Commission is an effort to create better conditions, by stimulating actors across the whole research and innovation chain to join efforts (EC 2014).

People who are in the position to stimulate partnerships can be very helpful in speeding up innovation processes. They appear under different names. Klerkx (2008) coined the concept of the "innovation broker", being an actor who matches the supply and demand of knowledge. In many countries and regions intermediate institutions operate with the task of translating farmers issues to researchers and research findings to farmers (such as the Knowledge Centre for Agriculture (formerly DAAS) in Denmark). Such intermediate experts speak the language of both farmers and researchers. Klerkx, Hall and Leeuwis (2008) observe that this function is not easily picked up by the market. They identify seven distinct types of intermediate actors between farmers, researchers and other stakeholders in the Netherlands. These types vary from innovation consultants and peer networks to agencies for inducing radical transformation.

One of these types is the "Innovation Consultant to Groups of Farmers". In the Dutch experiment "Networks in Animal Husbandry (2004 – 2007)" researchers were appointed as facilitators of farmers networks with sustainable innovation initiatives. They found out that this required more than simply matching farmers questions with knowledge taken from the shelves of research institutes, waiting to be utilised. Group dynamics also called for interventions, missing knowledge had to be created collectively, and other stakeholders often had to be involved to make innovations feasible. We found the term "facilitator" too limited for what they were actually doing: they had taken on the position of the "Free Actor", which was then ideally taken over by a network member after the assistance ended (Wielinga et.al. 2008; Wielinga and Vrolijk 2009). After 120 networks had been assisted, this approach became a regular subsidy programme of the Dutch government. Currently over 500 networks from all sectors are assisted this way annually.

It is interesting to see that in flourishing networks there is always at least someone who does just those things that lubricate the network process, and this is often not the formal or even the informal leader. In her research on networks promoting healthy nutrition, Wach (2013) calls them 'Champions': people who appear to be effective in creating and maintaining networks around the issue, without having any formal function that would require them to do so. Klerkx et al (2013) identify four types of champions in current management literature: power champions, technology champions, process champions and network champions, as people "who put in an above average amount of energy and determination to make an innovation succeed". In my thesis (Wielinga 2001) I identified such persons as 'Free Actors' doing whatever it takes to create connection and space in a network, whether they have a mandate for it or not.

New language is required
Multi-actor innovation partnerships differ fundamentally from production processes within a clear organisational structure. Also the language of the market where goods are being exchanged is insufficient to describe what it takes to engage in co-creation. Network processes are more comparable to the journey of the hero: who starts out with laudable ambition and good friends, well equipped and with a clear goal. Along the way, the equipment appears insufficient, unfore-

seen difficulties arise, friends may abandon the journey, and just when the situation seems hopeless, help from an unexpected corner saves the hero, who ends up in a better place than they imagined beforehand. How important was the goal here, and what did the helper do? What language helps to navigate such a process? Firstly I will distinguish three mainstays in thinking about innovation, each of which comes with its own vocabulary. Then three concepts will be explored, that (in my experience) appear to be useful for reflection on what matters most in co-creative network processes.

Transfer, Exchange or Co-creation

Transfer: "I know what is good for you"
For a long time it was common to expect innovations to originate from research, which would then be disseminated to farmers through extension. The 'Technology Push' referred to the strong position of the developers of new technologies. Early adopters would profit most, after which others were forced to follow in order to survive. Social sciences focused on the diffusion of innovations. Why did some farmers adopt innovations earlier than others? Farmers who would not adopt were labeled "laggards". The quality of the innovation was taken for granted, and questions about who would profit most were not being asked (Röling (1976, 1988).

Science had a high status, and in the case of problems, more public money would go to researchers to find solutions. According to this way of thinking knowledge is equal to objective and uncontested truth, to be generated or at least validated by scientific research. It is still typical for funding programmes to strictly separate knowledge generation (i.e. research) and knowledge dissemination. The EIP programme represents a significant step by the European Commission to break with this tradition.

Exchange: "Can we make a deal?"
In the 1990's a neo-liberal wave of thinking swept through the world, redefining the positions of major stakeholders in agricultural knowledge and information systems. Knowledge became a product, to be produced by researchers, and traded by advisors and consultants. Users became clients, who would pay for value. Public funding for knowledge institutions was reverted into programmes for which those institutions had to apply as contractors. The state positioned itself as a client in the market for products of collective interest. The technology push would then change into a demand driven knowledge system.

Although the knowledge market allowed for much more diversity than the former centrally managed system could, disadvantages became visible too. In a shrinking market with a rapidly declining farming population, heavy competition between advisors made them go for the quick wins, and sell advice within what is known and common. Time for updating knowledge and exchange of experience became an overhead cost to be reduced. Researchers had to spend much of their costly time on procedures for acquiring funds and reporting about progress. Moreover, clients cannot ask for what they do not know. *'In a strictly demand driven system no one gets the knowledge he really needs'* (Wielinga 2001).

Co-creation: "What can we achieve if we pool our resources for a dream we share?"
There are signs that partnerships could become a third mainstay in approaches for innovation and development approaches. It is the intention of Horizon 2020, the newly launched EU programme for agricultural development. In development assistance, much is being expected from partnerships between entrepreneurs, NGOs and knowledge institutions. In my practice as a consultant, I come across multiple examples of public agencies that wish to move away from the client-

contractor relationships that became dominant when public funding was involved. Instead, they seek a role as equal partners between stakeholders in networks to create new solutions together.

Collaboration based on partnership means that actors take each other on as partners, each with their own knowledge, skills, means and access to other networks. A shared ambition is the driving force. When people discover that others share their dream, the probability of making it come true becomes more likely. In the communicative way of thinking underlying this mode of collaboration, knowledge has another meaning again. What counts here is accepted knowledge: views of reality shared by partners are a basis for collective action. Such knowledge can only emerge from an interactive learning processes between these partners (Röling 1988, Engel 1997).

Forging partnership requires more than a broker in the strict sense of someone who brings parties together. Van Oost (2013) defines an *"innovation broker"* as *"a person that could help getting an innovation project started by acting as a go-between. The broker is not necessarily involved in the actual innovation project: he helps single actors which might have difficulties in finding partners."* All of the research experiences mentioned earlier have shown that this is not enough. Bringing stakeholders together is just the first step on the bumpy road to innovation.

This approach requires personal commitment. Whereas in the modes of transfer and exchange people may act on behalf of institutions, co-creation begins with something that people believe in themselves. The mandate granted by their respective institutions becomes a space that allows them to pursue what they really want to work on personally. It takes effort, skill and consciousness to enter into this mode. It requires trust, which must carefully be built up carefully.

Looking back at the history of Dutch agriculture, in the period of rapid growth from 1950 to 1975 relationships in the knowledge system were based much more on partnership then what people were later inclined to think. Innovative farmers, extension agents, researchers and policy makers formed a strong network with short information lines. They shared ambitions: first to reach food security at national level, and once this was achieved (around 1956) to conquer the world market. They succeeded quite well. To date The Netherlands is the second largest exporter of agricultural products in the world. The partnership even became so strong that it lost sight of the rest of society. Problems such as pollution and overproduction could just be thrown over the fence. When around 1984 society no longer accepted this and the government had to impose the first restrictive measures, the cost of the resulting mess was very high. In the decades that followed, the institutions that gave power to farmers and provided the glue in the system were gradually broken down and replaced by the rules of the market. In my thesis I concluded that, while doing so, the key factors for success had been broken as well (Wielinga 2001). In the last ten years we have seen a revival in appreciation for the importance of networks, for example in the network approaches mentioned earlier.

Intentions change faster than structures do. This causes friction, which is felt when people want to engage in creative processes and meanwhile the financial regime requires detailed project plans with step-by-step activities and SMART formulated outputs. The language and concepts that are common in mainstream market thinking are insufficient to give space to what co-creation requires. In the following chapters I propose some alternatives.

Vital Space

A biotope for co-creation

When people share resources and combine efforts, they can achieve much more than they could alone. This requires willingness to deliver input and align with others. When this succeeds, it is satisfying. People feel empowered and meaningful. This is energising and willingness to do more for the network increases. It is a self-propelling process. It provides space where people feel free to learn together and become creative. *'Vital Space' in a network is the space where people feel the freedom to contribute what they enjoy doing in connection to others* (Wielinga 2001).

This phenomenon is basic to human interaction, and as old as people living together in social groups. It is much older than the capacity to communicate through abstract language and think rationally. Accordingly, the steering mechanisms to keep human networks healthy are much older too, and deeply ingrained in the system of each individual. The structures people build to organise societies can be seen as living tissue in an evolutionary process, allowing for ever increasing task division and specialisation (Wielinga 2001). Living organisms, from individuals to ecosystems, remain healthy as long as the essential components are connected by feedback mechanisms (Maturana and Varela 1987, Capra 1996). In recent years there is rapidly growing interest in what can be learned from biology and neuroscience for human behaviour and human interaction. A new scientific specialisation has emerged: 'neurosociology' (Franks and Turner 2013). People are less rational in behaviour than planners or economists would like to think (Christakis and Fowler 2009). It is most interesting to explore human nature as part of the evolutionary process of life, and derive lessons about what really matters in network processes.

Figure 1: The Circle of Coherence.
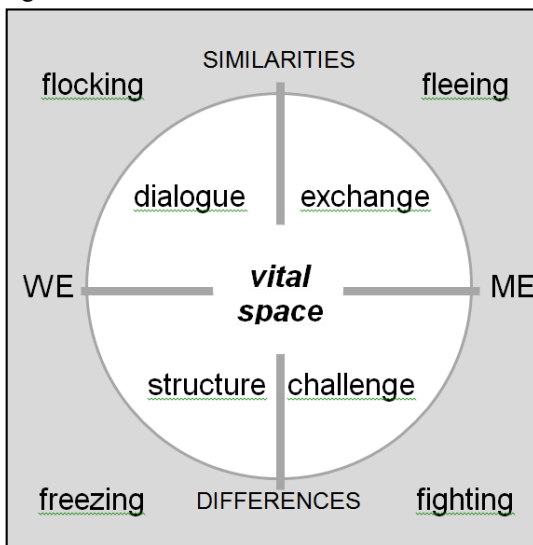
What does it take to create a biotope in a network of partners where people feel interested, curious, ready to probe different directions and welcome the unexpected? It requires a considerable amount of trust. But trust cannot be bought, manufactured or imposed. Elster (1983) calls it a by-product, that is self-defeating when one tries to get it under control. Actually this is true for all things in life that really matter, such as creativity, passion and love. Too much trust can also be detrimental as some abuse the ignorance of others. If vital space cannot be controlled, are there ways to influence a favourable biotope to make it grow?

Feeding connection
The key insight is that vital space grows by itself when there is connection. If we can find ways to feed connections between partners or remove obstacles to people connecting, then vital space will grow.

The Circle of Coherence (*figure 1,* Wielinga 2001) identifies interaction patterns in a network. Patterns within the circle feed connection, strengthening people's confidence that the network is valuable to them:

1. The pattern of *exchange*: People explore the balance between give and take, striving for mutual gain.
2. The pattern of *challenge:* Positions and competences are challenged. This contributes to confidence that people will do what they are able to, and that disagreements can be handled. A certain dose of conflict is healthy.
3. The pattern of *structure:* Collaboration requires agreement on task division and rules.
4. The pattern of *dialogue:* For collective learning and creation there must be keen interest in what others can contribute. Dialogue refers to interaction based on mutual curiosity.

These patterns are similar to the stages of growing maturity in groups, referred to in group dynamics as: forming, storming, norming and performing. However real life does not follow these stages so neatly. What matters is that all patterns receive sufficient attention in order to contribute towards higher levels of cohesion in the network. As networks are living organisms, the steering mechanisms are built in. This means that in a healthy network there will always be people trying to restore the balance in attention. The art of facilitation is in recognising what pattern needs most attention, and acting to restore the balance.

Removing obstacles
"Trust comes by foot and goes by horse", as the proverb says. People always live between hope and fear: the hope that others will complement them, versus the fear that they will not do so or may even take advantage of them. No one survives without defence. The Circle of Coherence distinguishes four basic defensive patterns, situated outside the circle because they do not contribute to the vital space.

1. The pattern of *fleeing:* If the balance between give and take seems negative, people withdraw. From the perspective of someone who cares about the network, they flee.
2. The pattern of *fighting:* When challenge turns into fight, this causes damage. Others are no longer esteemed opponents, but adversaries who must be disabled.
3. The pattern of *freezing:* When structures become stifling, partners no longer dare to move. Usually one partner maintains the structure which causes others to suffer. They keep each other prisoner. People complain because they are discontent, because they believe that first move for improvement must come from the others who fail to do so.
4. The pattern of *flocking:* A network can develop fear of losing its accomplishments, or flock against perceived outside threats from the outside. Criticism is suppressed, because it could weaken the group. People seem to agree strongly with each other, and do not allow themselves to deviate from what is expected because they might lose their position within the group.

In the first two patterns people disconnect from the network. In the last two, they disconnect from their authentic selves. Someone who cares about the network must recognise the type of pattern and the reasons behind it. If they can make people look at the situation differently, they may drop their guard. What this requires will be different depending on the pattern. I call such communicative efforts "*warm interventions*".

Stop escalating patterns

A third category of actions aims to stop patterns from escalating too far. When fleeing or fighting go from bad to worse it leads to chaos. When freezing or flocking escalate stagnation results. At some point people are no longer open for communication. For example, as long as fighting parties believe they can win unilaterally, they are not interested in negotiations. It then takes a third party to come in between them with sufficient power to remove such a perspective. When it becomes clear that continuation of the fight will only lead to further destruction, there will be willingness to reconnect in negotiation. Such actions using power that force actors to change position are called: *'cold interventions'*. For each escalating pattern a different type of cold intervention can be identified and used. What might be effective for haltin one pattern will be counterproductive in another. It goes beyond the scope of this article to elaborate on possible interventions. What matters is that the concept of Vital Space offers a wider scope for steering a network process than the targets and instruments we commonly define for keeping processes under control. As the Circle of Coherence shows, structure is only a part of what it takes for a healthy and creative process.

Free Actors

Who intervenes?
Intervening to stimulate the growth of vital space is not the same as taking the lead and giving directions. Who can be this intermediate actor who does whatever it takes to create the conditions for co-creative partnership? As stated earlier, people live between hope and fear. They hope others will make the partnership worthwhile, but fear they will not. Experience will show either.

Figure 2: Triangle of Co-Creation.

The Triangle of Co-Creation (*figure 2:* Wielinga et al. 2010) visualises positions people can acquire. Some people feel the drive to change while others are primarily concerned about stability in the structure. *Change agents* bring in the ideas and energy while *managers* bear responsibility and possess power to change conditions. Within these conditions *suppliers* deliver the building bricks to effectuate change (e.g. knowledge, skills, work power, means, etc.).

In the process of building vital space, actors will test each other's reliability. Each position comes with a certain suspicion. Managers might behave as *gate keepers*, merely inclined to keep things as they are and maintain their position of power. Suppliers might act as *survivors,* only concerned about their own survival, unable or unwilling to take any risks, or opportunistically taking ad-

vantage for their own benefit. Change agents might appear to be *activists* in disguise, who may rather see the structure demolished in order to make space for their ideals.

It is hard to overcome barriers to connection with others when people themselves are suspect. Then it is necessary that at least one actor under less suspicion and able to do whatever is necessary to remove barriers. Such persons may have acquired this position of 'Free Actor' due to their personality or reputation, because they have no conflicting interests, or a mandate that allows them to act according to the situation. Such a mandate is helpful, but not conditional. *A Free Actor is someone who does what it takes to stimulate vital space in a network, with or without a mandate.*

It is crucial that free actors follow their own judgement and dare to draw beyond the lines if needed. In a perfect structure there is no need for change. In imperfect structures mandates are imperfect too. However, this does not mean that free actors can do whatever they want. They are only effective when appreciated by their partners. Acquiring such a position takes personality, skill and strategy.

Strategies in the Triangle of Co-Creation

The distinction between positions according to the Triangle of Co-Creation helps to reflect on may be missing positions in a network at a certain point of time, and to consider possible actions. For example: change agents can sometimes approach managers too early, while it is more effective to build up a warm network of likeminded actors beforehand. In doing so, change agents strengthen the likelihood of their being taken seriously by the managers. Survivors only become useful suppliers when there is sufficient safety for them. As long as this cannot be provided, it is a waste of energy trying to get them on board. Managers who want change first should find change agents who share their ambitions and who are willing to make good use of the space they can get. Otherwise they enter in a boss – contractor relationship which can easily turn into a gatekeeper-survivor deadlock. When this occurs, the Triangle shows the position of the change agent as vacant, which explains why the system is lacking energy.

It goes beyond the scope of this article to elaborate on the full repertoire of possible actions. While people in collaborative efforts are often fully concentrated on content, the Triangle of Co-Creation helps to reflect on the process, and to express what partners whish and expect from each other.

Free Actors as a liberating concept

Free actors can be identified in every well-functioning partnership. No network can do without them. Yet language to appreciate this role is lacking. In a project on improving North-South collaboration in internationally operating NGOs, the key people recognised themselves in this position. So far they had felt that many of the things they did were necessary but more or less illegal because it was not in their task description. The Free Actor was a liberating concept for them. To maintain connection with their superiors however it was essential to find ways to keep them well informed about the bumpy road of network development they were following (Faber and Wielinga 2011).

Differences with knowledge brokers, facilitators and champions

A broker matches supply and demand. When researchers and farmers are drifting away from each other, the call for a broker seems logical. It fits neatly into the dominant market paradigm. It can be a job assignment and a service to be paid for, although Klerkx warns against too high expectation. Public funding remains necessary for an innovative knowledge system (Klerkx 2008).

In my opinion this concept is too limited for what it takes to develop new solutions in partnerships. It suggests that it is sufficient to help clients in articulating their demand whilst knowledge

is available but a bit difficult to find. More often than not information is abundantly available through internet, but the knowledge that is needed still must be developed. Moreover, innovation is not just a matter of applying new knowledge: it is about changing conditions and making actors move.

The term 'facilitator' covers more aspects of an innovation process, but has its limitations too. In contrast to experts, facilitators guide participants through a joint learning process without intervening in the contents. Usually they are being hired for a specific activity. In the terminology of the Triangle of Co-Creation, they have the position of suppliers, just like knowledge brokers.

Experience shows that shared ambition and passion is crucial to generate energy in a network. As a consequence, facilitators who only apply methods to guide a learning process, but do not connect with the ambition of the partnership or share the passion of the partners, are limited in what they can achieve. Moreover, they are restricted within the Terms of Reference of their assignment. For sure there are also facilitators who go beyond this and do excellent work in forging partnerships. Then they operate as free actors.

Often the work of connecting the right people is done by persons without a formal function or mandate, and in their free time. They are driven by ambition for the common good and have the skills to create vital space. Wach recognises the importance of such 'champions' but she is uncomfortable with the term herself. It is not about winning or losing. Essential is the ability to see problems as a result of complex systems, rather than caused by people to be blamed (Wach, 2013). This finding resonates with what is required of free actors in order to acquire a well-respected position. They must show respect and compassion themselves, which becomes more likely if they are able to understand human interaction as part of living systems.

Work for compliance or be a free actor

In my view every actor can choose to become a free actor, to a certain degree. The core choice is between completing a given task as well as possible (compliance), or using one's mandate to pursue an ambition. Looking at innovative capacity at the level of projects, programmes or systems, it is important to recognise people taking on the free actor positions and to grant them space. Free actors are always there, but the threshold may be so high that only few remain active. Current structures keeping people accountable for delivering products are often barriers to professionals doing what they believe in. Pressure to publish in highly rated magazines, or strict control on compliance with detailed plans are just some examples. Innovation cannot be managed like a production line. A new generation of tools is needed to manage processes allowing for the creation of vital space where joint learning and creativity can take place.

Responsive capacity

What justifies the intervention of a free actor?

If free actors follow their own judgement: what justifies their actions? If they feel they must deviate from the contract, go beyond the mandate or violate the rules: when is this helpful for a process of co-creation and for strengthening partnerships? One cannot escape from the insight that this is sometimes necessary. In a perfect structure there is no need for change, but it is also obvious that drawing beyond the lines can easily cause damage too. If a free actor is to be effective, to what goal is this effectiveness to be evaluated?

When we view human networks as living organisms, every component contributes to the larger entity of the ecosystem. When organisms lose their function, they die and decompose in elements that in turn will feed other forms of life. That moment comes when the organism is no longer

capable of responding adequately to what its environment requires. The difference between healthy and unhealthy systems is responsive capacity. This depends on the quality of the connecting mechanisms through which the components are structurally coupled to each other (Maturana and Varela 1987). When there is friction, it means that somewhere a connection is not functioning well, and this signal is picked up by change agents who call for action.

The change agents will probably not frame it this way however. It will be channelled into ambitions and operationalised in goals and targets. Without a goal there is no point in initiating movement. Then however the art of the free actor is to redirect efforts from controlling the process towards creating the conditions for vital space to grow, wherein actors become partners, share resources and become creative. Ultimately such vital space contributes most to the capacity of the network to respond to the challenges it faces in its environment.

Conclusion

This current period of time, with major challenges in feeding the world sustainably, calls for the participation and creativity of many stakeholders. Developments in the direction of partnership and co-creation, such as those supported by the EU EIP programme, are encouraging. These changes usher along shifting roles of stakeholders, bringing them into positions where they can learn continuously from each other. The concepts explained in this article intend to offer language for joint reflection on what matters most in creating fruitful partnerships.

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