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Sub-theme 34: Inter-organizational Collaboration and Networks

What do networks do to work: the agential role of network

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NB: *This is very much work-in-progress and we are still exploring emerging themes and refining the current themes that represent the inter-organisational learning research. We, therefore, welcome any feedback and comments for improving this piece.*

Abstract

The article draws on an ongoing study of interorganisational learning in project based organisations and how organisations learn through network settings. The article aimed at drawing theoretical explanations of network learning especially after learning moved from interorganisational learning to inter-networked learning. The article employs the structure agency relationship by Dave Elder-Vass as theoretical lens to draw conclusions that provides fresh explanations of how network are helpful in fostering learning activities. The research method included interviews, observation and archives. Data were analysed using thematic analysis which generated codes and then conclusion were drawn. The main contributions of this article are (1) to portray agency as another face of structure, (2) stress the agential role of networks, and (3) looking at networks as agents provides fresh understanding of benefits of networks.

Keywords: network, organisational learning, structure, agency, duality

Introduction

We live in a networked society. Everything is almost networked; internet, our work, and our social life. It became almost impossible to stay disconnected from all social media such as LinkedIn, Facebook, Twitter, and Youtube. But those electronic social networks are not the only networks that people are connected to. On a business level, organisations have realised the importance of formal and informal networks to explore and exploit knowledge and to foster innovation. This led to the practice of 'networking' to intensify and diversify in several ways. For example, temporary and permanent networks of innovations within organisations were formed.

Interorganisational networks have also been established to exchange knowledge and expertise across organisations. However, such networks created tensions inside and outside the organisation. Challenges of knowledge leakage and knowledge centralisations are amongst other challenges to and from networks. This has prompted the need for organisations to look for practices that could bring the best benefits of networks and on the other hand, to alleviate the challenges that such networks pose. In response to this call within this sub-theme, this article is concerned with network practices and how they are looked at from different perspectives.

This article reflects an ongoing study that seeks to understand how organisations, through networks, learn across their boundaries to enrich organisational knowledge and improve performance. In specific, our study draws upon five networks from different industries to observe how meanings and norms are produced and reproduced within the framework of structure agency debate. The networks are mainly from photography and construction industries, consultancy, and entrepreneurship. For example, the Photography Network is a network that brings organisations and individuals together to discuss issues related to photography. Their discussions include best practices, mutual projects, future collaboration, and socialisation. Although our early observation indicated many instances where participants utilised the network to improvise photography techniques, observations also revealed a lack of collaboration in some cases where network participants were reluctant to share knowledge to juniors or seniors for fear of knowledge leakage.

Therefore, the main purpose of this article is to demystify the network dynamics in light of the structure-agency debate. The article does not seek to tackle the recent debate on structure and agency in details; however, discussing bits of the debate is essential. With this in mind, the article will tackle the question as to “what are the intended and unintended outcomes of informal social networks at work?” The article will discuss the evolution of network thinking from structure to agency, see how network could be looked at as an agent, and discuss its agential role (i.e. how do ideas travel from network to *work* and the other way round?). Studying the role of networks on business brought in the attention of different authors (e.g. Arya and Lin, 2007, Baraldi, 2008, Besser and Miller, 2011, Blaschke et al., 2012, Castells, 2011). However, the majority of such studies overlooked this role from the structure-agency theoretical perspective.

Theoretical background and research gap addressed

Networks are used currently as knowledge hubs that help organisations to discuss issues related to their work practices, organising, improving performance, and improvising practices (Orlikowski, 2002). The research on networks is increasing and the impact of networks on organisations has been studied in several disciplines (e.g. Borgatti and Foster, 2003, Brass et al., 2004, Ahuja, 2000, Arya and Lin, 2007, Aviv and Ravid, 2005, Brass et al., 1998, Blaschke et al., 2012).

Although networks are formed for different purposes such as learning about new techniques, gaining experiences, solving problems, or influencing, the main purpose of organisations and individuals join networks is that they seek to change (Valente, 2012, Stange et al., 2012, Graetz et al., 2012). The concept of organisational change has been exhaustively studied in organisational setting (See for example, Graetz et al., 2012, Todnem By, 2005, Hannan and Freeman, 1984, Greenwood and Hinings, 1996). There is less research on how organisational change is sought and achieved on network levels. This article does not aim to study networks as a level of analysis as much as explaining how networks could be complex role player in the organisational change.

Previous studies have tackled the network as a structure that provides a hub for shared activities (knowledge sharing and practice improvisation) to take place. Brass

et al. (2004) conducted a multilevel literature review on networks and therefore defined network as a group of nodes and a group of ties that connect nodes. This definition takes the structuralist view which reflects the ideas of Karl Marx about society in which he stated that "Society does not consist of individuals, but expresses the sum of interrelations in which individuals stand with respect to one another" (Mayhew, 1980). This view advocates the perception of network as a collection of ties rather than nodes; i.e connectionism.

The research on networks has two fundamental dimensions. The first is causes of network structure (i.e. how networks evolved?) and the second is the consequences of network structure (i.e. what networks resulted in?). However, Borgatti and Foster (2003) clarified that most of the research has tackled the structural role of network. Strength of tie, embeddedness, centrality, etc. are dimensions that have been studied in the network research. Such dimensions are conditions that shape the structure of network. In parallel to the effort of this article to address shift of the network thinking from structure to agency, the questions "why organisations network" and "why individuals join networks" should shift to "how do networks shape the organisations?".

It is those debates between the structure and agency, micro and macro, etc that makes sense in the social theory (Barnes, 2001). The debate on the complex relationship between structure and agency is a mere exemplification of the debate on the relationship between structuralism and individualism (Elder-Vass, 2010). The debate was mainly split between structuralists and individualists which lent itself to the question of "Are [structuralists and individualists] to be concerned with explaining social phenomena purely in terms of the contributions of individuals, or are there characteristically social forces that affect social phenomena?" (Elder-Vass, 2010). Accordingly, (Elder-Vass, 2010) summarised the debate on structure and agency could be divided into two main streams as (1) structure and agency are separable (e.g. methodological collectivism, methodological individualism , emergentism and (2) structure and agency are inseparable (e.g. structuration theory).

Social structure may refer to normative institutions, organisations, or gender as Elder-Vass (2010) exemplified who then summarised that social structure could be

seen as (1) structure as wholes and (2) structure as relations. However, despite the variety of definitions and explanations of social structure, (Elder-Vass, 2010) claimed that they are “riddled with failures of ontological clarity”. Agency has been always thought of as human agency by critical realists (e.g. Elder-Vass, 2010, Harvey, 2002, Reed, 1997). This assumption could be put under scrutiny by lending the question of (Elder-Vass, 2010) as to what made human being own the power of action?. Bandura (1989) conceptualised the nature of human agency into three types: (1) *autonomous agency*, (2) *mechanical agency*, and (3) *emergent interactive agency*. Bandura (1989) then concluded that the self is partially shaped by continuous application of self-influence, thus rejecting the idea of autonomous agency. Elder-Vass (2010) epitomised agency as political agency (power could be exercised by group) and individual agency (power could be exercised by individual).

Research methodology

The approach taken in this article is theoretical based on an understanding of (Elder-Vass, 2010) approach to structure and agency. The article mainly draws upon Miles and Huberman (1994) outlines of the three main processes of qualitative data analysis: (1) data reduction, (2) data display, and (3) conclusion drawing. In data reduction, methods and data were selected carefully to best answer the research question. In data display, descriptive texts were used and then conclusions were drawn. The article adopts a qualitative approach based on data collected from five different networks that represented different sectors including media industry, consulting industry, and construction industry. The networks included project-based businesses and are illustrated in Table 1 below:

Table 1: Networks description

#	Networks	Industry	Description of network	Data sources
1)	Network I	Media	<ul style="list-style-type: none"> Photography network based in Liverpool and Manchester. 	<ul style="list-style-type: none"> 10 Interviews Some observation Archive

#	Networks	Industry	Description of network	Data sources
			<ul style="list-style-type: none"> • Open membership • Participants usually 25 each event. 	
2)	Network II	Media	<ul style="list-style-type: none"> • Photography network based in Liverpool. • Restricted membership • Participants are usually 12 each event. 	<ul style="list-style-type: none"> • 5 Interviews • Some observation • Archive
3)	Network III	Construction	<ul style="list-style-type: none"> • Residential Construction managers network in Manchester. • Closed Restricted membership • Participants are usually 10 each event 	<ul style="list-style-type: none"> • 5 Interviews • Some observation
4)	Network IV	Consulting	<ul style="list-style-type: none"> • Training and consulting network in North West Region. • Open membership. 	<ul style="list-style-type: none"> • 10 Interviews • Some observation

#	Networks	Industry	Description of network	Data sources
			<ul style="list-style-type: none"> Participants are usually 15 each event 	
5)	Network V	Jewellery	<ul style="list-style-type: none"> Gold and Diamond supply chain network 	<ul style="list-style-type: none"> 4 Interviews Some observation

Data sampling was grounded on theoretical basis which means that we carried out data collection and stopped when the level of data saturation was clearly achieved (Eisenhardt and Iii, 1988). The analysis of networks was based on parameters of the research that were developed through replication logic (Yin, 2009). This means that each pattern generated from analysing networks was dealt with as an isolated experiment that seek to either confirm or disconfirm the precedent experiment (Eisenhardt, 1989).

Each network represented at least the network administrator or coordinator and one participant. For example, *Network I* is a photography network based in Manchester but holds events in Manchester and Liverpool. The network gathers professionals and companies to discuss and share experiences about photography. Interviewees includes the network coordinator in Liverpool, one photography magazine editor and several photographers. The analysed data were used to develop theoretical contributions of the research that aim - at a later stage beyond the boundaries of this article - to develop a theory

Data collection

Data collection was carried out between 2012 and 2013 in North West region in UK. Data collection was mainly performed using (1) interviews (2) observation and (3) archives.

Interviews

Twenty four (24) semi-structured interviews were conducted with photographers, editors, lecturers, management consultants, business trainers, acoustics engineers, and gold and diamond consultants. The principal researcher started to contact networks in March 2012 using either email, phone or face to face in order to get access. The purpose of research was illustrated to each network administrator or coordinator. The researcher then attended events held by the networks that agreed to participate in the research. Participants were approached individually. Each interview lasted between 40 – 120 minutes. The total duration of interviews was around 30 hours. Interviews were mp3-recorded and transcribed verbatim.

The researcher used an interview guide that included a set of questions categorised in order to serve and manage the flow of information from interviewee. The categories included for example, general background of the organisation, reasons for joining the network, benefits from networks, and experience with networks. The guide was used flexibly which means the researcher did not follow the flow of the categorisation but while using all of the categories in interviews, more questions were raised following interviewees replies. Consequently, the researcher raised questions that evolved during the interview, which encouraged interviewees to bring up further issues related to networks. Informal conversations with some informal conversation continued through emails or networking events. Conversations were in the form of follow up of networking experience and seeking potential interviewees before theoretical sampling is achieved.

Observation

The researchers observed three networks. Observation took the form of attending a meeting and one or two events in Manchester and Liverpool. The observation was focused on three main themes namely (1) understanding how members interact during discussions, (2) understanding why they joined this network and (3) uncovering what members add to the network and the other way round. The principal researcher who conducted the observation has taken detailed notes including daily observation journal and photographs. The researcher attended also some training sessions organised by consulting network (*Network IV*).

Archives

Archives in the form of reports and guestbook were used in limited manner. Meeting minutes, flyers, and old photographs of networks have been used to provide further description of the network. We focused on those sources of information that describe how participants joined network and how they interact.

Data Analysis

We analysed interviews, observations and archives, based on inductive conceptualisation to be able to interpret and structure in a framework the meanings of the chunks of data collected. To that end, our conceptual framework sought to interpret the role of participants in networks that shapes and is shaped by the network agency. The conceptual framework assumes that networks are agents and that their agential role is evident and may shapes organisation settings and individuals perceptions. By analysing the data we seek to provide theoretical contributions that could, within the larger study (PhD project) that this article is part of, develop a theory of agential role of networks. We collected stories that describe both professional and personal timeline of participants within the social boundaries of the network. To that end, we developed a coding system which classifies the data collected including the interviews, observation and documents.

Data analysis was dynamically conducted. The interviews were semi-structured which allowed a series of questions to be raised but at the same time, many questions emerged as a result of the direction of conversations. After analysis started, more questions emerged from analysis and they were deployed into the semi-structures interview guide after conducting 30% of interviews. This allowed more patterns to emerge as well (Patton, 2005). Going through the transcripts of interviews and observation journals allowed us organise them by generating our coding system. The system is based on the criteria of (Miles and Huberman, 1994) who suggested coding is: (1) descriptive codes, (2) interpretive codes, and (3) pattern code.

We formulated descriptive codes based on the literature review in the form of conceptual categories that included structure, agency, emergence, network, learning, and outcomes. We then assigned keywords that are linked up to each descriptive code to be able to detect each category within the masses of data. Interpretive and

pattern codes then were formulated to explain each category and also to link the categories with each other when appropriate.

Main findings: Agential role

The findings of our investigation into data has led to promising avenues towards formulating a theoretical model of agential role of network. Investigating the agential role of networks does by no way mean that this will pause the functionality of network as a structure, but rather we are trying to see the network as an agent and at the same time realising that network can serve as a structure. This will help to first leave the debate of supremacy of either structure or agency, and second give more perspectives to the roles of networks that could do in our life; for example, how do networks affect knowledge sharing (Lazer and Binz-Scharf, 2007)?

We are rather shifting the way we look at network from structural to agential. This shift formulates question, e.g. what do networks do? how do networks reproduce and challenge the logics of organisations (Vaast and Walsham, 2005)? This discussion may not please methodological individualists who think the society does not exist and that individuals are in effect nor would please structuralists who think individuals are governed by social structure. The reason for this discontent may be that methodological individualists do not want to recognise network as an agent, nor do structuralists accept that network will be treated as agent. Recently, Martin (2010) concluded that there is an increasing acceptance among scholars that social order should be understood through "*real people*" in his article titled "On the retreat from collective concepts in sociology". In other words, human agency is superior over social structure.

Why people join networks

When people come to network, they come to learn something. They perceive the network as a place where they can influence and influenced by. Do people know exactly what networks are? Does it make sense to them to know if it is a structure or an agent? Actually, to give a short answer: *Yes, they do*. We claim here that people sometimes look at network as agent rather than a structure. This answer needs to be clarified using the literature and data.

The term structure is sometimes misleading. Organisations and individuals may feel obliged to submit to the structure for the properties of structure is to regulate and formulate social actions. In this regard, the following paragraph quoted from the seminal work of (Sewell Jr, 1992) on duality of structure and agency gives important insights as why organisations and individuals could be *structured* by a structure:

The term structure empowers what it designates. Structure, in its nominative sense, always implies structure in its transitive verbal sense. Whatever aspect of social life we designate as structure is posited as "structuring" some other aspect of social existence-whether it is class that structures politics, gender that structures employment opportunities, rhetorical conventions that structure texts or utterances, or modes of production that structure social formations

Do people join networks because they are reputable and prestigious ones or because they do them a favour? It is what network does to them which matters more than what the nature of network is. Some people are deluded by the network appearance (structure) and might think big networks are always beneficial. But this time has gone after the boom of social media. Who buys from products from eBay without reading reviews of others? It is important for many customers to build a profile about the product before pressing the *buy* button. That said, people socially construct their meaning of the product. And it is similar in networks. Before joining networks, many people search the internet or ask colleagues or friends who joined or heard about the network especially if the network is paid subscription one.

In the Jewellery network, participant PO works as gold and diamond consultant for her own company. She illustrated how she joined the network as follows:

I didn't know anything about networks or networking. I even did not know anything about jewellery before ... I met PR on dinner and we talked a lot and enjoyed the dinner. She asked "oh by the way do you JEWEL network? I said No what it is about? She told me it is business network for jewellery and people come to market products and buy products so why don't (ya) come with me and you see what it looks like... So after she persuaded me I decided to go because I was eager to customers especially I moved newly to UK and my social relationships are still limited... and here I'm.. I joined the network and met that gentleman who was

interested to buy the ring for his wife.. the 400 pounds I paid to join this network never gone for nothing.

From what participant PR has said, two main points are drawn. The first point is that her new friend told her about the network. This was new friend in UK and PR's connections were limited therefore any new connection counts for her. This socially weak relationship has offered her information that otherwise could be redundant (Granovetter, 1973). The second point is that her friend has provided a description of the network, stressing more on the nature of network and how important it is for PR to join (i.e. influencing using the structure of the network and agency of actors). The claims made here implies the importance of structure. However, when PR was asked why she really joined the network she replied:

Well, it is what it offered to me as I said. I managed to sell a very expensive ring. I did not care about how nice or well established this network was ..how many people join was the most important thing for me.

PR was not impressed by network properties but she was interested in what the network does and who joins. Again, it is important to borrow from narration of (Sewell Jr, 1992) who further explained:

The most fundamental problem is that structural or structuralist arguments tend to assume a far too rigid causal determinism in social life. Those features of social existence denominated as structures tend to be reified and treated as primary, hard, and immutable, like the girders of a building, while the events or social processes they structure tend to be seen as secondary and superficial, like the outer "skin" of a skyscraper, or as mutable within "hard" structural constraints, like the layout of offices on floors defined by a skeleton of girders. What tends to get lost in the language of structure is the efficacy of human action-or "agency," to use the currently favoured term.

This means that on the interorganisational level (networks), the conception of favouring network features not the processes is problematic for it ignores the function and praises the structure. So the question that is valid in this disposition is: if it was not for the structure, what qualities has the network have to infer the action of

participants? In other words, what form does network carry to make its role active? To be able to answer this question, it is important to understand what agency means.

From the organisational learning research, Argyris and Schön (1978) suggested that individual is the agent of learning. This in fact reflected the everlasting debate in organisational learning literature, as who the learner is; the individual or the organisation. In this regard, explanations of (Bandura, 1989) which are based on human agency suggested that the "self-belief of efficacy" is what marks human agency capable. By this, Bandura (1989) meant that agents need to feel they are capable of imposing actions or exercising control of things. It is a cognitive process where people plan, judge and forecast based on their recognition of their efficacy (Bandura, 1989). Being it cognitive or emotional, what is important is the network being able to influence and to cause actions rather being described as a rigid structure.

Network building network

In the previous category, we have discussed how networks influence individuals. In this category, the level of analysis will jump to further levels; that is of interorganisational level. This category was influenced by the question of how do networks build other networks. Our data indicated that this category was replicated in at least two networks. In Network I, BS is the owner of a photography company. BS is interested in photography and education. He lectures at university as well in IT educational materials. He joined Network I since 12 years and his commitment as he described is "distinguishable". When he was asked about the network he is connected to he replied:

... I'm networked in the photography area, I'm networked in the e-learning community, I'm networked in the health community as well, locally and nationally and internationally ...

BS not only is connected to one network, but rather to three different networks that he described as "learning networks". This part of the interview was so interesting that the principal researcher asked him why *He* is connected to those three different networks, he then replied:

I like to give a part of me back to the networking people..... I do it as part of my return back to society because what society gives me is an opportunity to network people and get to know different people, some like-minded people.

BS first joined photography and he was so committed that he attended regularly and sometimes arranges events. He learnt new techniques and sent back his newly acquired knowledge to his business partners. He, however, was a lecturer at the university. When he noticed his students struggle in some subjects, he decided to establish a new network similar in principle from the photography network. The purpose of the new network was to help students communicate and share their experiences and also overcome difficulties they face in the module he teaches. He was also interested in health community network in Liverpool. The reason is that his best friend is a photographer too but teaches health modules at the same university. Although BS was inspired by the network that his friend invited to, BS failed to convince his friend to join his own network.

BS was inspired by networks. Photography network made him create another network and inspired him to join another network (health community). The role that the network played is strong enough to create another network thus expanding the breadth of networks. BS when asked whether he made personal relations (i.e. friends) out of networks, He said later that:

Yeah.. I have four friends whom became friends only from the network. We meet up weekly and talk about photography and personal life. We sometimes travel to Scotland and Wales to take photos of the nature.

In this, BS created a micro network that resulted from a larger network i.e. vertical generation. The purpose of this network was to get more focused on mutual interests. This presents the network evolution as both vertical (smaller networks of the larger one) and horizontal (more networks of same size are created). "It takes a network to build a network" (Lazer and Binz-Scharf, 2007).

Agency pays back: motivation

In Consulting Network, RS manages a consultancy firm that provides training for managers in presentation skills. He was asked what he thinks the network benefited him and what he feels about the network. The network to an extent inspired him that he felt he has always to give back to network because network reciprocates with him. He said:

...I organised the day, I organised the location and I made sure everybody was in contact with each other and everybody was safe so I looked after people but in exchange for allowing it to take place ...

By taking the stance of agential role of networks, the network is looked at as an agent that could be reflecting and reflected upon. A recent study of (Van Den Ende et al., 2012) investigated how *standard content* is reacting with standard supporting organisational networks. Not only had the study focused on the impact of the network on the standard, but also on standard's impact on the network itself. The study stressed the importance of standard flexibility on increasing network members and spreading the network growth and diversity. This makes the network more genuine in seeking to establish the standard for which reason the network was established (Van Den Ende et al., 2012). However, the main contribution of (Van Den Ende et al., 2012) was that network has a co-evolutionary nature. Networks were found to reciprocate with their environment from one side to produce specific outcomes and reciprocate with those specific outcomes from another side to strengthen network position.

Borgatti and Foster (2003) stressed that the majority of network research was dedicated to the consequences of networks, but it was not evident that such consequences were treated as part of agential role of network. It is important to understand what is meant by consequences of networks. The root of "consequences" can be traced back to cause and effect model. From the causality perception, consequences of networks may not result from the agential role of networks. A network consequence might have occurred because of a force other than the agent (the network). This is framed in the question of how we can make sure a network

consequence was linked to the network dynamics for example. Agential role of network could have produced a consequence, but it is difficult to claim that this consequence is truly related to network unless we are knowledgeable about network agential role.

We link back to the data. Although SC seems to be a person who believes in reciprocity, has described reciprocity as “mercenary” and “nasty” as he said:

And you penetrate because of this—this chip you’re bringing to it. So it does sound very mercenary but, you know, as I say, the students I’m working with, I try to encourage them to go to every event that I’m at especially if it’s free. Look, if it’s free, you should go, you know. Why, you know, pay, you know £9,000 a year and go to a lecture to listen to say me, who is relatively nobody, when you can go to a free talk and listen to someone who has got something, maybe an international status. And it sounds like I’m being very generous but I say to them look if you go there, I’m going to introduce you to people. If I introduce you to people, I’m bringing an audience and I become valuable because I’m seen to be bringing an audience with me to the event, which means I will get something else out of it. It’s nasty, isn’t it?

The work of Wuyts and Dutta (2012) is important in understanding the agential role of network. They have studied networks in an alliance portfolio and concluded that the diversity of alliance portfolio is important for innovation. But this importance doesn’t actualise without the internal knowledge that is also necessary to manage portfolio diversity. This result is congruent with path dependence perspective that was also studied by (Van Den Ende et al., 2012) who investigated the role of networks in shaping path dependency and concluded that network inflexibility was a result of “diminishing scope of actions” during network different phases. For example, Van Den Ende et al. (2012) noticed organisations join a network because of network flexibility to accept new entrants, but when that network size increased, it became difficult to change the standards that the network was trying to develop. When network was small in size, it was flexible and this encouraged more organisations to join which in turn decreased the flexibility of that network. This discursive relationship

could be better explained through Figure 1 below.

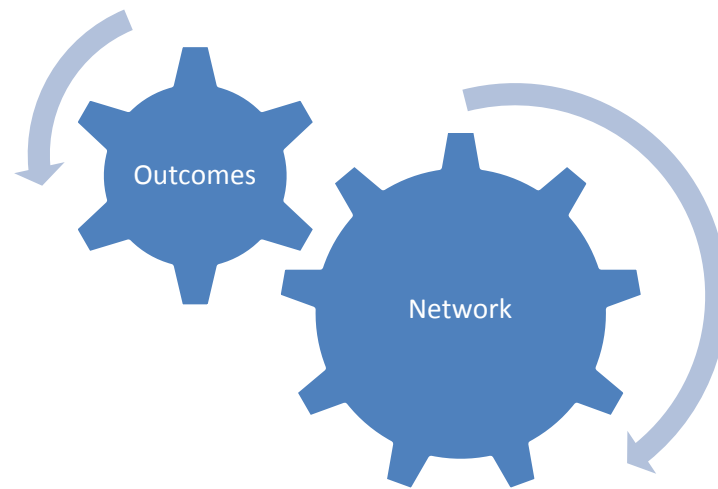


Figure 1: Relationship between Network and Outcomes

Probably we could claim this short script adopts (Bhaskar, 1998) philosophical thesis that social world could be understood through explanations that are based on emergence. When individuals, who represent various organisations, agreed to establish a network, they meant that this network would operate as a hub for knowledge and experience sharing. It might not be that this network is meant to change the organisations. However, what was really deemed as a viable purpose of networks is to make this network a way to change organisations. So it is not the structure of network which will cause or lead to the change, however, the consequences of networks will do; i.e the agency of the network. Organisations and networks do not think primarily of how many network participants are sufficient to change the organisations, but how this number of participants could make the network able to serve the purpose of knowledge sharing and action improvisation (Da Cunha and E Cunha, 2001). For this said, the basic assumption of network when established is argued to be a governing body that takes the form of a social structure that is able to serve its members. However, this assumes that we submit to that social structures are active, adopting structuralist philosophical stance.

The emergence causal power is important to understand what the network is and where it is going. For example, Gulati and Gargiulo (1999) have raised the emergence as a fundamental question in their research “Where Do Interorganizational Networks Come From?”. Their research mainly discussed the relationship between multiple networks and found out that organisations, which seek a specific network, rely on other networks to be able to decide which network they should cooperate with. This decision-making procedure was found later on to change the existing network structure. This has made the internal dynamics between organisational decision-making procedures and network structure ignite the formation of new interorganisational networks.

Agential role

We need to stress that agential role of network does not mutually exclude the structural characteristic of networks. We believe the two qualities of network (structure and agency) are not mutually exclusive in action nor are they in theory. To synthesise from the data collected and literature reviewed, we would employ the questions of (Elder-Vass, 2010) that he believe would check if networks have agential role or not. The four questions are “(1) What are the parts, and how are they related, that make up human individuals? (2) How does this sort of structure lead to the powers that they possess? (3) And how is this sort of structure brought about and sustained?” however, Elder-Vass (2010) indicated to the difficulty to ontologically discuss the three questions without understanding the nature of human biology which is necessary for human social functioning, in addition to human behaviour that can be influenced by external forces.

The assumption of (Elder-Vass, 2010) would limit the concept of agential role of networks. To that end, if we look at networks, does not they have biological system? Biological system does not have to be of human flesh or have heart and lungs per se. A biological system could be thought of as a mechanical system. Networks could be assimilated to human body from functionality point of view. In this regard, functionalist overview is adopted. It is the function of biological system what matters many. Therefore, networks may function well without having the same biological properties of human. In addition, human behaviour was incorporated with biological

system. This dichotomy looks like it was a structure agency debate where structure is human biological system and the agency is human behaviour.

Sewell Jr (1992) suggested that agents should be knowledgeable and free to exert power of influence. On interorganisational level, they keywords should adapt to the level under investigation. Networks could be knowledgeable in the sense of collective decision making that is processed within the boundaries of network. If we come to deprive network of knowledge, this seems similar to claiming organisations do not learn.

In social systems, structure and agency are looked at as binary settings i.e are mutually exclusive (Giddens, 1984). Superiority was generally given to structure where agents understand and freely exercise the rules that the structure diffuses (Sewell Jr, 1992). We think network structure and agency are two sides of a coin and they exist at the same time. Structural properties of network infer agential properties of the same network to take actions.

Conclusion and implications

This article is a conceptual paper and part of doctoral research that examines current network practices to diffuse knowledge across organisations. The article aimed at presenting a new perspective of how to study network practices. Network research has ignored the debate of structure and agency. Employing the agential role to networks, could provide fresh explanations for network practices and network antecedents. Looking at networks as a form of a structure may not reflect the purpose for which networks were created. Networks were created to impact and ignite change and improvement in current business practices. Structure is always perceived as a form that meant by to stabilise more than to change. Marriage institution was not meant to change but to stabilise relationships. Patriarchal institution was also meant to stabilise the domination of male.

Structures are static more than dynamic otherwise they would not qualify for the name “structure”. While on the other side, agents are not recognised as agents until they create action through their own free will (such as producing and reproducing

meaning and norms); that is the change that will lead to stability. The change might be progressive or regressive but it seeks to create stability that would cause equilibrium with the social structure. For this reason, network is closer to behave in an agential role rather than a structure.

The main contribution of our article is to use (Elder-Vass, 2010) theoretical lens of structure and agency in interorganisational settings. This provides fresh understanding of how network *work* and what networks do to *work*. Another contribution is not only we appreciate the agential role of network but also we think agency and structure are effective at the same time and one benefits the other.

This research contribution is believed to open the door for more research to study networks and how organisations learn across their organisations employing the perspectives of structure-agency debate.

Bibliography

- Ahuja, G. 2000. Collaboration networks, structural holes, and innovation: A longitudinal study. *Administrative Science Quarterly*, 45, 425-455.
- Argyris, C. & Schön, D. 1978. *Organisational learning: A theory of action perspective*, New York, Addison Wesley.
- Arya, B. & Lin, Z. 2007. Understanding Collaboration Outcomes From an Extended Resource-Based View Perspective: The Roles of Organizational Characteristics, Partner Attributes, and Network Structures. *Journal of Management*, 33, 697-723.
- Aviv, R. & Ravid, G. 2005. Reciprocity analysis of online learning networks. *Journal of Asynchronous Learning Networks*, 9, 3-13.
- Bandura, A. 1989. Human agency in social cognitive theory. *American psychologist*, 44, 1175.
- Baraldi, E. 2008. Strategy in industrial networks: experiences from IKEA. *California Management Review*, 50, 99-126.
- Barnes, B. 2001. The macro/micro problem and the problem of structure and agency. *Handbook of social theory*. London: Sage, 339-352.
- Besser, T. L. & Miller, N. 2011. The structural, social, and strategic factors associated with successful business networks. *Entrepreneurship & Regional Development*, 23, 113–133.
- Bhaskar, R. 1998. Critical realism and dialectic. *Critical realism: Essential readings*, 575-640.
- Blaschke, S., Schoeneborn, D. & Seidl, D. 2012. Organizations as Networks of Communication Episodes: Turning the Network Perspective Inside Out. *Organization Studies*, 33, 879-906.
- Borgatti, S. P. & Foster, P. C. 2003. The network paradigm in organizational research: A review and typology. *Journal of Management*, 29, 991-1013.
- Brass, D. J., Butterfield, K. D. & Skaggs, B. C. 1998. Relationships and unethical behavior: A social network perspective. *Academy of Management Review*, 14-31.
- Brass, D. J., Galaskiewicz, J. & Greve, H. R. 2004. Taking stock of networks and organizations: A multilevel perspective. *Academy of Management Journal*, 47, 795-817.

- Castells, M. 2011. *The rise of the network society: The information age: Economy, society, and culture*, Wiley-Blackwell.
- Da Cunha, J. V. & E Cunha, M. P. 2001. Brave new (paradoxical) world: structure and improvisation in virtual teams. *Strategic Change*, 10, 337-347.
- Eisenhardt, K. M. 1989. Building theories from case study research. *Academy of Management Review*, 532-550.
- Eisenhardt, K. M. & Iii, L. J. B. 1988. Politics of Strategic Decision Making in High-Velocity Environments: Toward a Midrange Theory. *The Academy of Management Journal*, 31, 737-770.
- Elder-Vass, D. 2010. *The causal power of social structures: emergence, structure and agency*, Cambridge University Press.
- Giddens, A. 1984. *The constitution of society: Outline of the theory of structuration*, Univ of California Press.
- Graetz, F., Rimmer, M., Lawrence, A. & Smith, A. 2012. *Managing organisational change*, John Wiley & Sons.
- Granovetter, M. S. 1973. The strength of weak ties. *American Journal of Sociology*, 1360-1380.
- Greenwood, R. & Hinings, C. R. 1996. Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review*, 1022-1054.
- Gulati, R. & Gargiulo, M. 1999. Where Do Interorganizational Networks Come From? *American Journal of Sociology*, 104, 1439-1493.
- Hannan, M. T. & Freeman, J. 1984. Structural inertia and organizational change. *American Sociological Review*, 149-164.
- Harvey, D. L. 2002. Agency and community: a critical realist paradigm. *Journal for the Theory of Social Behaviour*, 32, 163-194.
- Lazer, D. & Binz-Scharf, M. C. 2007. It Takes a Network to Build a Network. V. Mayer-Schönberger & D. Lazer (Ed. s), *Governance and information technology: From electronic government to information government*, 261-280.
- Martin, P. J. 2010. On the retreat from collective concepts in sociology. In: MARTIN, P. J. & DENNIS, A. (eds.) *Human agents and social structures*. Manchester: Manchester University Press.
- Mayhew, B. H. 1980. Structuralism versus individualism: Part 1, shadowboxing in the dark. *Social Forces*, 59, 335-375.

- Miles, M. B. & Huberman, A. M. 1994. *Qualitative Data Analysis*, London, Sage.
- Orlikowski, W. J. 2002. Knowing in practice: Enacting a collective capability in distributed organizing. *Organization Science*, 13, 249-273.
- Patton, M. Q. 2005. *Qualitative research*, Wiley Online Library.
- Reed, M. I. 1997. In praise of duality and dualism: rethinking agency and structure in organizational analysis. *Organization Studies*, 18, 21-42.
- Sewell Jr, W. H. 1992. A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 1-29.
- Stange, K., Olsson, P. & Österblom, H. 2012. Managing organizational change in an international scientific network: A study of ICES reform processes. *Marine Policy*, 36, 681-688.
- Todnem By, R. 2005. Organisational change management: A critical review. *Journal of Change Management*, 5, 369-380.
- Vaast, E. & Walsham, G. 2005. Representations and actions: the transformation of work practices with IT use. *Information and Organization*, 15, 65-89.
- Valente, T. W. 2012. Network interventions. *science*, 337, 49-53.
- Van Den Ende, J., Van De Kaa, G., Den Uijl, S. & De Vries, H. J. 2012. The Paradox of Standard Flexibility: The Effects of Co-evolution between Standard and Interorganizational Network. *Organization Studies*, 33, 705-736.
- Wuyts, S. & Dutta, S. 2012. Benefiting from Alliance Portfolio Diversity: The Role of Past Internal Knowledge Creation Strategy. *Journal of Management*.
- Yin, R. K. 2009. *Case Study Research: Design and Methods*, Thousand Oaks, Sage.