

**NETWORK PICTURES: CONCEPTUAL DEVELOPMENT AND PRELIMINARY FINDINGS**

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## ABSTRACT

The degree to which any company or relationship is embedded within a broader network of interrelated relationships has been noted in much of the literature. Building on this theme, recent work has examined the concept of *Network Pictures*. An actor's Network Picture can be defined as that actor's explicit or implicit representation of the context in which his business interactions take place and which forms the basis of his thinking and operations. In this paper we explore the use of Network Pictures ('NetPics') as a conceptual tool in understanding business markets. The paper presents a conceptual model that may be used to analyse individuals' network pictures and presents some tentative outcomes from an empirical study that has explored them.

## INTRODUCTION

Recent work building on the original Interaction Approach of the IMP Group (Hakansson, 1982) has tended to focus on understanding the complexity of the broader environment within which business-to-business relationships are embedded. Companies are embedded in a Network of relationships, reflecting the interdependence between companies' actions, reactions and interactions (see, for example, Mattsson, 1987; Hakansson & Snehota, 1989; Anderson et al., 1994). Out of this body of work has come an appreciation of the importance of understanding the wider network when examining the operations of individual actors. This "network" has no pre-defined ontological status, but consists of different nodes and threads depending on the particular preoccupations of those considering it. A single network may be seen in widely different forms in the idiosyncratic 'network pictures' of those involved (Ford et al., 2002a; 2002b; 2003). These pictures may or may not be coherent, complete, previously articulated or wholly perceptual. A network picture is therefore a conceptualisation *by the observer* of the network views of participants. It is a representational technique that aims to capture or illustrate the views that specific actors have of the networked environment within which they operate. Network pictures may be represented in pictorial and/or written or spoken form. They aim to capture the way that individual's try to make sense of, or to find logic for, the surroundings in which they are integrated. The sense-making concept was initially analysed solely at the individual, cognitive level but Weick (1995) brought the concept into the inter-subjective and organisational level. In the literature concerning the Industrial Network Approach, the relevance of actors' subjective views of their surroundings and of the way they make

sense of the Network in which they operate, has been noted by several authors such as Anderson, Hakansson and Johansson (1994) and Mattsson (1987).

## **NETWORK PICTURES, NETWORKING AND NETWORK OUTCOMES**

A model of managing within networks can be argued to consist of three different aspects: Network Pictures, Networking, and Network Outcomes, where network pictures are “the views of the network held by the participant” ( Ford et al, 2003:176) and each actor’s picture is the basis for their perceptions of what is happening around them and of their actions and reactions in the Network. A company’s Networking includes all of the interactions of a company or individual in the network, including all its activities concerning the management of the existing relationships, the management of the position that it occupies in their surrounding Network and strategies on how to network (Ford et al., 2002b; Hakansson and Ford, 2002). Companies do not choose whether to be in networks or not. All are. As argued by Ford and Havila, “all the companies in a network are simultaneously networking by suggesting, requesting, requiring, reacting, performing and adapting activities” (2003:8). Finally, the Network Outcomes are the result of the networking activities of all the involved actors.

These three aspects are all interconnected. For example, NetPics are affected by Networking since Networking experiences may affect the views that the company holds of its surroundings. NetPics are formed by interaction with other companies, through the company’s Networking, since whatever happens in this process necessarily affects the company’s NetPics. On the other hand, NetPics also strongly affect the Networking process, either restricting a company’s activities or advancing its levels of innovation (Ford et al., 2003). NetPics are the basis for actors’ analysis and actions, and in this way networking activities are a direct function of a company’s NetPic (Anderson et al., 1994; Gadde et al., 2003; Johanson and Mattsson, 1992; Möller and Halinen, 1999; Ritter, 1999) and since all companies have a unique network picture, each will network differently (Ford et al., 2003a:8). Similarly, there is an interconnection between NetPics and Network Outcomes: NetPics are affected by Network Outcomes since those pictures will be reinforced or adjusted according to the perception of the resultant outcomes (expected versus “real” outcomes). Associated with a company’s NetPics are expectations concerning the outcomes of Networking activities. If such expectations are not fulfilled, the company modifies its NetPic in order to exploit a new and different scenario. On the other hand, NetPics affect Network Outcomes since the former are used

by the company to “observe, assess and respond to only a subset of networking outcomes that affect it, based on its particular network picture” (Ford et al., 2003b, p. 184).

The relevance of this sort of representational construct was initially raised by Mattsson (1985; 1987). He argued that managers interpret their surroundings on the basis of previous experiences and memories as well as their beliefs about the future and about how those cognitive structures influence other individuals’ actions. There is therefore an implicit acceptance in this of the role and relevance of actors’ sense-making processes, combining both retrospective and prospective timeframes, as well as access to information that enables organisational decision-making (Pfeffer and Salancik, 1978).

**NETWORK AND SIMILAR CONSTRUCTS**

Prior to Ford et al. (2002b), various authors had used different expressions to refer to a similar idea to NetPics, as shown in Table 1. Concepts such as ‘Network Theories’ (Johanson and Mattsson, 1992; Mattson, 2002, 2003), ‘Network Horizon’ (Anderson et al., 1994; Haimala & Salminen, 2004; Holmen & Pedersen, 2003; Salmi, Havila, & Anderson, 2001) or ‘Network Maps’ (Borders et al., 2001) may be considered as other sense-making devices that can be applied to an Industrial Network environment. More recently, Welch and Wilkinson (2002) introduced the concept of ‘Ideas’ or ‘Schemas’ as a possible forth dimension of the AAR (Actors, Activities and Resources) Model for Industrial Networks (Hakansson and Johanson, 1992). This AAR Model constitutes an important element of the IMP Group Network research and therefore, by suggesting the integration of actors’ ‘Ideas’ or ‘Schemas’ in the Model, Welch and Wilkinson are taking a contentious position: advocating that the importance of actors’ frameworks should be considered as a central issue in the Industrial Network Approach literature. We would see the notion of Ideas or Schema as entirely complimentary to our notion of NetPics.

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Table 1 about here

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We are not claiming, however, that the notion of NetPics is central only to IMP researchers’ thinking. Indeed, in other bodies of literature, such as those focusing on competitive groups and strategic management research, the relevance of managers’ cognitive frameworks has also been

considered and concepts such as 'Cognitive Groups' or 'Causal Maps' were applied (Astley, 1984, b; Hodgkinson, 1997; Hodgkinson, Tones, & Padmore, 1996; Osborne, Stubbart, & Ramaprasad, 2001; Porac, Thomas, & Baden-Fuller, 1989; Schwenk, 1988; Stubbart, 1989). Walsh (1995) has developed a comprehensive literature review of managerial and organisational cognition studies of the last decades.

## **INDIVIDUAL AND CORPORATE NETWORK PICTURES**

NetPics are held by individual actors and not by companies (Ford et al 2003, Hakansson and Ford 2002). They suggest that in order to deal with multiple managerial situations, multiple NetPics should be used (see also Anderson et al., 1994). This occurs naturally, in an implicit way, since the multiple NetPics held by distinct individuals within organisations coexist and are in use simultaneously in reaching group decisions. Each company will probably contain distinct, individual, idiosyncratic, atomized, dispersed and probably contradictory NetPics (Mouzas et al., 2004), each corresponding to an individual or even to a function (Ford and Thomas, 1995; Ford et al., 2002b; Mattsson, 1987). However, by observing and analysing companies' actions, reactions and interactions, it may be possible to infer that one generalised organisational view, one 'apparent' NetPic, underpins the company's interpretation of the situation. Nevertheless, this generalised NetPic that is identified does not correspond to a reification of individuals' NetPics. This predominant NetPic may simply be a reflection of the company's internal relationships of power and dependence among individuals or functions (Cook and Emerson, 1978), or it can reflect a consensual view of the surrounding Network. It is not possible to infer one NetPic for the entire company by simply combining the distinct NetPics held by each of its managers. Therefore, to understand an organisation's 'apparent' NetPic, it is necessary to analyse individuals' NetPics and so to discern their extent of commonality. There is not one abstract or 'correct' NetPic (Ford et al., 2003). NetPics are atomised and distinct actors might well have contradictory NetPics (Ford et al., 2003): different understandings of what the extent, content and characteristics of the Network may be (Ford et al., 2002b, p. 2, see also Belbin, 1993; Lockett and Naudé, 1998; Islei et al., 1991).

NetPics are more than a mere representation of the Network, in the sense that they always serve a specific end (Ford et al., 2002b). This instrumentality implies assumptions concerning the process of their construction, and also their application. Thus, while looking at their surroundings, individuals unconsciously include in their frameworks what they consider as relevant, impactful or

useful. Consciously or not, practitioners make use of their own and others' NetPics with some objective in mind.

The problem here is that it is often difficult to infer these implicit objectives from the NetPics alone. The shortcoming of the Henneberg et al. (2006) approach to analysing the dimensions of NetPics is a methodological one, in that it is based on collecting the pictorial evidence (i.e. the NetPics) and subsequently analysing these in terms of the dimensions used – in other words at the pictorial level alone. The typical focus when analysing NetPics collected in this way is on the physical *actors* in the network, since (in our experience) this is almost exclusively what the managers include in their representations. Perhaps more importantly, a pictorial network picture gives little insight into the actor's views of process (activities or evolution, what activities are and are not effective), resources (physical, economic, coercive etc), the actor's own intentions and his views of others, or his normative perspectives.

## **AN APPROACH TO ANALYSING NETWORK PICTURES**

In order to overcome this, and to use the NetPics in a more interpretive way, we believe that an additional methodology is required. In order to understand the broader environment and the role of the activities and the resources in the NetPic, managers need to be interviewed interactively, so that they can explain the logic underpinning the NetPic that they have constructed. In undertaking such interviews, we would propose a sequential methodology as shown in Figure 1. This focuses first on the scale (identifying the actors involved) and the structure of the Network (the nature of the actors, as well as the resources available), followed in turn by a discussion of the processes of the Network (understanding the relationships involved), and finally the personal positioning in the overall Network (what it is that each focal actor is attempting to achieve). We briefly discuss each of these three dimensions below.

### **Figure 1**

The Proposed Dimensions of Network Pictures

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## **1. Scale and Structure: Identifying the surrounding actors and their aspirations, resources and problems**

The number and nature of included actors and resources is directly dependent upon actors' horizons (Anderson et al., 1994; Holmen & Pedersen, 2001; Holmen et al., 2003), and hence there is a strong connection between these issues and the concept of 'artificial' boundaries of a Network. Depending upon the amount and nature of actors and resources included in the actor's view, it is possible to (partially) assess either if the actor has a broad or narrow view of the surrounding Network.

While it may always be possible to find a relation between any two companies, since there is one global Network which includes all business companies (Easton & Araujo, 1992), because of actors' limited cognitive capacity, business environment's complexity (Holmen and Pedersen., 2003) and invisibility of some network relationships and connections (Anderson et al., 1994), only a restricted number of situations and actors can be identified and acted upon (Anderson et al., 1994; Hakansson & Johanson, 1993; Hakansson and Snehota, 1989; Henders, 1992; Holmen and Pedersen, 2001, 2003; Salmi et al., 2001). Network boundaries are defined according to the particularity of a specific situation, always dependent on actors' perspectives (Spender & Eden, 1998) and according to each actor's "theories-in-use" and past experiences.

In terms of number, it is then very common for managers to include in their analysis merely those companies that they consider as relevant for their activity (Anderson et al., 1994; Ford et al., 2002; Holmen et al., 2001). This fact may be interpreted as a tendency to place too much importance on their own business, neglecting the analysis of other relevant aspects (Ford et al., 2002). By doing so, companies may be misleading themselves in perceiving that they have "their own" Network; a Network which they control.

The shortcoming of this analysis of the scale of the Network is twofold. First, analysing aspects such as NetPic horizon or the number of actors leads possibly to a very restricted view, and the danger of viewing NetPics in a stereotypical or dogmatic way – for example, as supply chains. Second, no notions of managerial processes or decision making can be inferred at the pictorial level alone. In order to understand these broader issues, we need to appreciate not just who is in the NetPic (the actors), but also the intangible aspects of what is happening between them – i.e.

the resource ties and activity bonds that form the links between the nodes (i.e. the actors represented). Each NetPic will be based upon the views that the particular manager has of how the network is structured, why it is structured in this way, and how it works – but this cannot be inferred at the pictorial level alone. For example, different actors may simultaneously be looking at their surrounding Network from different perspectives (as a supply chain, distribution channel or other), and this will impact the number of companies included in their representations. In order to appreciate these issues, the methodological tool needs to be expanded to include the other elements: structure of the Network, processes of the Network and self-positioning.

In terms of structure, actors look at the nature of the surrounding actors and resources (Ford et al., 1998). The company level of analysis included in the scheme suggested by Hakansson et al.'s (1995) to analyse development effects of business relationships<sup>1</sup>, combined with the same authors' concept of actors' capability development, may be used to assess the way actors see the surrounding structure: actors look for the resources, aspirations and potential problems (problems that they may encounter while trying to fulfil their aspirations) of the surrounding actors (Ford et al., 2003a; Ford et al., 2003b; Hakansson et al., 1995). In other terms, no matter what is the nature of the relationships that the actor views, when looking at the surrounding, a company looks at what are those companies' capability development and subsequent resources, potential aspirations and probable problems. A company's capability development (organisational structure, resource constellation and activity structure) reflects the resources, opportunities, or ability that the company has to develop relationships with other companies (Hakansson et al., 1995). In order to fulfil its aspirations, a company will probably try to develop relationships or its own capability development, facing problems while trying to achieve those goals or aspirations (Ford, 2005).

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Figure 2

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<sup>1</sup> This scheme integrates three levels of analysis for the three elements of the ARA Model (Actors, Resources and Activities): the company level, the relationship level and the Network level. It has been used for the past decades by the IMP followers as a critical tool to "analyse the effects of change in a relationship and/or to identify the factors that affect the possibilities of development of a relationship" as well as a "heuristic device in coping with relationships in business", since it allows to "single out the critical issues in coping with relationships, to assess the state of a relationship and its development potential" and "thus it can be used to identify where and how to intervene in relationships in order to get some desired effects" Hakansson, H., & Snehota, I. 1995. ***Developing Relationships in Business Networks***. London and New York: Routledge.. It reflects the dynamics involved in business relationships as well as the critical issues regarding coping with business relationships.



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## 2. Processes of the Network

The processes of the Network reflect its dynamics, or “the space between its nodes”. The scheme suggested by Hakansson et al.(1995) to analyse the development effects of business relationships (p. 45), can also be used to capture this NP dimension: scale and structure are captured at the company level of analysis while processes correspond to the relationship level of analysis. Therefore, and according to Hakansson et al.’s (1995) scheme of analysis, the processes of the Network concern actor bonds, resource ties and activity links. This can be combined with Hakansson and Snehota’s (1995) notion of substance of relationships.

The substance of relationships becomes visible in actor bonds, resource ties and activity links from the surrounding Network (Hakansson et al., 1992; Hakansson et al., 1995)<sup>2</sup>. There is a strong subjectivity underpinning these dimensions since actors’ interpretation results upon individual constructs based on past experiences (Weick, 1969, 1979b) or result from a global collective experience passed on to the subject (Hakansson et al., 1995). This means that a considerable extent of uncertainty and subjectivity underly the identification of each of these dimensions and the interdependencies among them. For each of the defined dimensions, actors’ “theories-in-use” concerning the nature of each of the ARA Model elements (actors, resources and activities) play a fundamental role since they condition the way they may perceive their surroundings. Actors’ interpretation of what exists and of what is happening is based on those levels of analysis.

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Figure 3

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## 3. Personal Positioning

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<sup>2</sup> “The essence of the Network function of business relationships is that as they arise they form a structure of actor bonds, activity links and resource ties where third parties are integrated” Hakansson, H., & Snehota, I. 1995. ***Developing Relationships in Business Networks***. London and New York: Routledge..

Identifying what position a particular company occupies in the Network can be done by looking at its surrounding and co-existing web of actors, resource constellations and activity patterns (Hakansson and Snehota, 1995), which are the result of the relationships established between the companies. When a company takes strategic action, it is doing it (even if unconsciously) as a way of achieving a better position in the surrounding Network. Companies proceed to mobilising actions of other companies and respective resources. But once again, there seems to be a strong subjectivity underpinning this process since companies do not objectively know what position they occupy in the surrounding Network, however defined. The actors' views on the positions that the other actors have among themselves, is accessed by the actor when looking at the structure of the Network, i.e. at the nature of the surrounding actors and relationships established between and with them. A company might have a perception of the position that it occupies in the Network. This perception will probably depend, among other factors, on the company's characteristics as well as of the surrounding Network characteristics. Misconceptions concerning positioning (the company's and others') may jeopardize its viability since strategic actions will be developed on the basis of inadequate perceptions of the surrounding Network (Johanson and Mattsson, 1992).

## **EMPIRICAL STUDY**

There are no natural, real or objective boundaries between Networks and therefore it is not possible to establish objectively where a specific Network starts or ends (Ford et al. 2003; Ford et al. 2002). However, these 'artificial' boundaries have, for practicality reasons, to be established (Ford et al. 2002). For this particular project, artificial' boundaries were established to restrict the empirical analysis to two specific situations. This research has a multiple case design (Yin 1994) and two situations are empirically addressed. Each situation corresponds to 'a' Network of companies that are somehow connected and associated to the situation in question. Both situations were selected for being intrinsically interesting, and also for presenting some very distinct features (from a relational exchange perspective (Lambe et al. 2000)). One of the case Studies concerns a specific way of producing and delivering "hole-through-the-wall" or *in plant* production, according to which production takes place within the buyers' facilities. The supplier provides integrated outsourcing by having its own plant in the buyer's facilities. For this situation, a "Network" of companies which are somehow connected to the production of rigid plastic containers, namely companies supplying materials, producing and using packaging in the food industry within Portugal were included in the project. There is an increasing practice of the "hole-through-the-wall" production in this industry. The second Case Study is about a situation of solely project-based production. In this circumstance,

actors are involved for a short period of time in order to carry out a function in a specific project. After the project is over, or after the contribution of these specific actors has finished, there are no more contacts between the parties once involved in the project. Those actors that continue giving support to the project even after they finish their part (they may continue providing maintenance services or others) were not included. For this situation, the research project includes a “Network” of companies and organizations surrounding the construction of a major project, a Metro system for the large Portuguese city of Porto, part of this city’s urban and local transportation services.

## **Research Design**

Npics are the primary and single unit of analysis of this research project. Since one of the aims is to assess how Npics differ between and within companies and to generalize the concept in relation to individuals and companies, several circumstances have to be empirically analyzed. The research is being conducted at two levels of analysis: inter-organisational and intra-organisational. Most of the time, the analysis is conducted at the company’s level (intra-organisational). Two data collection techniques were used, namely verbal (semi-structured open interviews and a set of scenarios) and visual techniques (respondents are required to draw their own NP of the Network) (Meyer 1991). The use of visual data techniques is merely an additional technique in order to get a deeper understanding of individuals’ Npics. Respondents were asked to draw what they saw in the surrounding and then asked to explain what they had drawn. Additionally, there was a set of questions regarding the three suggested dimensions for capturing respondents’ NPics and at the end of the interview, they were asked to answer a series of scenarios on networking situations.

The identification of the included companies was the result of two distinct phases: initially, the identifiable and most relevant companies for the situation were included; the remaining companies were identified according to a “snow-ball”. Interviews were carried out with an average of five managers from each company. These managers were key elements involved in the networking decision-making process (people with a strong role in the company’s procedures) and in most cases, the general, production, commercial, operational and technical directors were included. The data analysis is conducted with the help of NVivo, software for qualitative data, and it entails a content analysis approach.

## **Framework for Analysis**

Figure 4 shows details of the coding frame that was developed on the basis of pilot interviews and was used to content-analyse transcribed interviews. Throughout the interview, respondents frequently showed a different focus for the following issues: the actors they included, the relationship processes they considered, an orientation towards actors versus processes between them, the time span of their views and their functional orientation. Individuals' NPics also often presented different levels of moral and normative weight, and frequently attributed different levels of importance to knowing what was going on around them. It was frequently possible to identify the following categories in respondents' views: coherence with their organization's board stated identity, nature of the framework adopted, nature of self-positioning and also situational and actors' specificity. Finally, individuals' NPics usually presented throughout their speech different extents of overall coherence, structuredness and stasis. These categories were identified in the speech of the majority of respondents but not all of them were traced for each individual.

The main coding was divided into four subsections, each corresponding to each group of identified categories: focus, weight, content and overall features. Each group was then divided in the several sub-categories that were identified for each category.

## **1 Focus**

### ***1.1 Nature of the Focus on Actors***

While talking about one's surroundings, the respondent may place a greater focus on him/herself, on the company that he/she works for or on the surrounding companies. If the focus was on him/her own, then the respondent talked in the first person and mentioned mostly situations concerning him / her self, speaking about his/her particular department and functions, processes between these and other surrounding companies and also about his/her own resources, aspirations and problems. If the respondent placed greater focus in the company that he/she works for, instead of talking about him/herself and his/her department, the respondent talked mostly about the company in general and about his/her relations with the surrounding actors, as well as his/her company's resources, aspirations and problems. Finally, the respondent might choose speaking predominately about the surrounding companies' features and relations among these.

### ***1.2 Nature of the Focus on Processes***

While describing the processes that take place in the surrounding, a respondent could place a greater focus on actor bonds, resource ties or activity links. If the respondent placed greater emphasis on actor bonds, while talking about processes that go on in his/her surrounding, the main issues that he/she highlighted concerned relationships' atmosphere, talking about issues regarding power-dependence, commitment, closeness-distance, cooperation-conflict, expectations and understanding. The respondent could also place greater focus on resource ties and in this case he/she spoke mostly about the ties between companies' resource collections (technical, commercial, administrative know-how and tangible elements such as man-power, equipment, plant and knowledge) and relegated issues concerning actor bonds or activity links. Finally, the respondent might demote to a secondary plan issues related to actor bonds and resource ties, speaking mostly about companies' activity links: the transfer or a transformation of resources between actors. In the latter case, the respondent is mostly interested in relationships' underlying processes.

### ***1.3 Focus on Actors versus Focus on Relationships***

A respondent may place a greater focus on the surrounding actors or on the relationships that are developed between and with those actors. If the focus was on the actors, then throughout his/her speech he/she would speak mostly about the scale and structure of the surrounding, talking about resources, aspirations and problems those actors might have, not placing much attention on the processes that go on between them. He/she would show greater interest in the nodes than in the links. If, on the other hand, the focus was on relationships, the respondent spoke mostly about processes: bonds, ties and links between actors, resources and activities. By assessing the scale and structure, as well as the processes of the Network, respondents would develop a perception of the positions that they as well as others occupy in relation to each other.

### ***1.4 Nature of the Time Focus***

A respondent could place a greater focus on past, present or future events, depending on the period of time that they would more frequently talk about throughout the conducted interview. If the respondent's focus was on past events, then throughout the interview he/she would speak broadly about events that took place in the past, assessing and describing relations with and between companies based on past times. This respondent draws mainly on previous experiences

to describe the surrounding. On the other hand, if the respondent's time focus was on the present moment, then he/she would only talk about the current situation with and between other companies and about very recent events. Finally, if the time focus was on the future, the respondent probably had a strategic orientation, making forecasts for how he/she expects to happen in the surrounding in future times.

### ***1.5 Nature of Function Focus***

While describing what he/she could see around him/her, an respondent could place greater focus on issues related to the function that he/she plays in the organization and in this case he/she would speak mostly about issues related to that function and would be using throughout the speech technical expressions associated to that function. Another possibility would be for the respondent to articulate his/her view of the world highlighting the function played by someone else, speaking mostly about that function (s) related topics and another possibility would be for the respondent to speak without placing any focus on a particular function.

## **2 Normative and Moral Weight and Importance given to Knowledge**

### ***2.1 Normative Weight***

Throughout the interview, the respondent could transmit the idea that his/her view of the surrounding was just a mere reference, a view without normative weight, or else the respondent would speak about it in normative terms. If the respondent talked about his/her view in a very straight and assertive way, stating that things had to or could not happen in specific terms, then the respondent's view held a normative weight guiding his/her everyday activity. On the other hand, if the respondent considered it as a mere reference, then he/she would refer to it as something that he/she is not even sure of really being like that or not, not finding it very important for his/her activity or for the organization's activity. In this case, the view held by the respondent was a mere reference that resulted from his/her overall perceptions.

### ***2.2 Moral Weight***

Regarding the moral philosophy associated with one's view, an respondent may either consider his or her own view as an imperative for what should and should not be done (what is morally correct and what is not) or the respondent may not confer it any considerable moral weight.

### **2.3 *Importance Given to Knowledge***

A respondent may consider knowing what is going on in the surrounding being important or not. If the respondent considered it as being important, then he/she would claim making an effort to know what was going on around him/her, even if it meant knowing about entities (or relations among entities) with whom he/she did not have any direct contact with. On the other hand, if he/she did not consider it as being important, he/she would not speak much about entities with whom he/she was not in direct contact with and sometimes he/she could even state not having any interest in finding out more information about those other parties.

## **3 Content**

### **3.1 *Nature of the Framework***

While talking about the surrounding actors and relationships (with and among them), the respondent could talk in Network terms or in terms of some other form of representation: a supply chain, chain of value or any other form. If the respondent's framework reflected a Network, then he/she represented and/or talked about actors that are directly or indirectly connected to the company, as well as about the relationships with or between those actors. Otherwise, the respondent might talk in terms of some other form of representation.

### **3.2 *Coherence with the Identity Stated at the Corporate Level***

The respondent could present a view which might be coherent or non coherent with the view which underlies the identity stated at the corporate level of the company that he/she belongs to (in case there is such an explicit identity). If the respondent presented a view which was coherent with the stated identity, then he/she expressed his/her view using the company's identity main lines or using his/her own views that by coincidence were consistent with the company's identity. The respondent might also express a view incoherent with the stated identity when he/she did not agree with the organization's identity or considered his/her own perceptions as being more appropriate. In this case, the respondent stated principles that were incoherent with the company's diffused identity.

### **3.3 *Nature of Self-Positioning***

Regarding self-positioning, the respondent could hold a centred or a peripheral view. If the respondent held a centred view, then he/she always introduced his company into every topic that he/she talked about. The respondent assumed that his function or company played a central role in the overall surrounding that he/she described. Therefore, the focus was placed on him/herself or on the company. On the other hand, if the respondent held a peripheral view, then he/she would assume for him/herself and for his/her company a position of mere observer of what was going on in the surrounding. In this case, the respondent talked mainly about what took place within and between the surrounding actors, assuming a submissive role for him/herself and for the company when describing relations between his/her company and counterparts. The company or function that he/she belongs to is, according to the respondent's beliefs, a secondary and not very important part of the overall surrounding.

### **3.4 *Situation and Actor Specificity***

While talking about what was going on in one's surroundings, the respondent may talk either about general situations or specific ones. If the respondent talked about specific situations, then without being asked he/she mentioned particular episodes or situations that took place with a particular client or supplier or other party. On the other hand, the respondent might choose talking about general situations and in this case he/she did not mention particular situations but just talked about events in general. In what concerns the actors, the respondent could speak about groups of actors or about specific actors. If the respondent spoke about specific actors then he/she mentioned specific names of people, departments, companies, or groups of companies. On the other hand, if the respondent talked about groups of actors then while describing what he/she was seeing, the respondent spoke mostly about actors such as "clients", "suppliers", "competitors", not talking about specific names.

## **4 Overall Coherence, Structuredness and Stasis**

### **4.1 *Overall Coherence***

Throughout the interview, the respondent could speak in a more or less coherent way. Therefore, for this category and on a simplifying basis, two dimensions were identified for each individual's NP: coherent or in conflict. If the respondent had a coherent view, then all through the interview



he/she would never say things that could be in conflict with statements that had been said before by the respondent. If the respondent had a view in conflict, then he/she would auto contradict him/ herself along the interview.

#### **4.2    *Structuredness***

A respondent may have a structured or unstructured view of the surrounding. If the respondent had a structured view then, throughout his/her speech and from the moment the respondent begun drawing his/her views on the surrounding, he/she followed a very well defined line of thought, where actors and relationships or situations were systematically exposed and explained. On the other had, if the respondent held an unstructured view, then while explaining what he/she saw in the surrounding, the respondent would go back and forward, both when drawing and when talking, adding new intervenient and new relations to his/her view.

#### **4.3    *Stasis***

The respondent may either transmit an evolving or static view. If the respondent had an evolving view, then he/she spoke about different periods of time or situations concerning a specific actor, resource or relationship. On the other hand, if the respondent had a static view, then he/she spoke solely about a specific period of time or about a specific situation.

### **SOME PRELIMINARY FINDINGS**

In this section some of the preliminary findings that emerged, throughout the data collection and early data analysis of the project are presented.

**Overviews:** Throughout the study, respondents pictured their surroundings with confidence. In other words, they commonly inferred that their view was “correct”. Also, it was common for respondents to express their views in normative terms as a view of how the world should be and of what particular actors should do.

Some of the respondents claimed to see their surroundings in terms of a Supply Chain or some other stereotypical framework. But in fact, many of them articulated their views in terms that we

would associate with a Network view. These respondents identified and described indirect relationships or relationships between the companies' direct counterparts and others. They talked about the consequences of those relationships for the company's business, in fact discussing some of the dimensions of the AAR model or even approaching the interdependence between company's positioning and strategizing. There are several possible explanations for this phenomenon. Use of conventional stereotypes may be an attempt by respondents to keep things easy to explain or to manage. Alternatively it may simply be the way that the respondents were taught as students. It could be that the respondent may be taking on the Netpic of his company or of another smaller group (department or function) and this may not be coincident with the respondent's own picture.

On the other hand, some respondents apparently did see their surroundings in less complex terms and considered their company or department as merely a part of a set of modules that are necessary in a supply chain, chain of value or other. These respondents did not seem to consider or were unconcerned about identifying indirect relationships or interdependences, AAR related issues or the consequences of diverse positioning.

Individuals holding a Networked view were usually performing or had performed externally oriented functions such as marketing or commercial functions and in most cases had considerable experience. It was also in most cases identified in people who seemed more open minded towards the possibility of changing their views of their surroundings and who were not focused on him/herself or the company but more on its surroundings. On the other hand, individuals giving some other form of representation of their surrounding were in most cases performing internally oriented functions and had been in the business / company for a short period of time and/or apparently showed greater resistance towards the possibility of changing their views.

**Focus on Actors or on Relationships:** Some respondents viewed their world as a collection of significant actors, while others saw it in terms of relevant relationships and processes that take place between companies. Respondents whose focus is on the actors, think in terms of the scale and structure of their surroundings, namely about the resources, aspirations and problems that the other actors may have, whilst not placing much attention on the processes that exist between them. On the other hand, those whose focus is on relationships tend to talk in terms of processes: bonds, ties and links between actors, resources and activities.

This corroborates previous IMP research that has suggested that those people who focus on actors hold a restricted view of their surroundings and do not have a strong perception of the positions that actors occupy in those surroundings or the consequent opportunities and threats of that positioning. These respondents appear to be less concerned with the relevance of the relationships that exist between actors for their own activities, or they may simply not be fully aware of their existence and therefore, consciously or not they do not include them in their frameworks. Respondents that placed their focus on the processes hold a Networked view of the surrounding.(Hakansson & Ford, 2002).

Respondents who placed greater focus on actors usually held vast experience in their industry and seemed to know a lot about other companies' related business. In most of these cases, respondents apparently have a very restricted view of the surroundings. On the other hand, respondents that focused primarily on relationship-related issues had in most cases not been in the company for a long time and had performed diverse functions (either in that company or in others). Generally, these respondents identified themselves closely with the explicit orientation of the company. Those respondents who focussed on processes appeared to have a more comprehensive view of their surroundings.

**Focus on Actor Bonds, Activity Links and Resource Ties:** One of the ideas behind the AAR Model (Hakansson & Johanson, 1992) is that Actor Bonds, Activity Links and Resource Ties are a useful set of descriptors of a relationship *when taken together*. Interestingly, this research showed that respondents seemed to place a focus on only one of these three suggested dimensions. A particular interesting subset of respondents viewed their world as being made up of significant individual actors. These respondents personalised companies in terms of the views, motivations and bonds between a small number (often one) of significant individuals within each company. Others talked mostly or solely about resource-ties related issues, relegating the other two AAR dimension to a secondary position whilst others speak broadly about activity links.

The respondents that emphasised issues regarding actor bonds were often involved in externally-oriented functions. Most of them showed reluctance towards the possibility of changing their views. Generally, they were concerned with representing relationships as patterns of social interchange and they looked to the human aspects of interactions as a potential tool for achieving

advantage either or both of the parties involved. Respondents that focused mainly on issues related to resource ties were usually associated with technically oriented functions. These respondents relegated human aspects of the relation to a secondary sphere. In most cases, respondents held a view centred in the function they held in the organization. The majority of respondents that placed focus on resource ties related issues had a relational orientation towards counterparts in similar functions. For example, technically oriented people seemed to be mostly interested in what other technically oriented people had to say. Generally, these respondents seemed reluctant to change their views of their surroundings. Finally, the respondents that spoke mostly about activity links were also mainly in technical functions. These respondents had in most cases a view centred on a function and presented a relational orientation towards the people that had a similar focus. Very often, these respondents seemed reluctant to change their views.

**A Dynamic or Static Perspective:** One other issue that is often focused by the IMP body of literature is the dynamic nature of Networks and the need to appreciate this dynamism while conducting network related studies. Some individuals in this study did have a dynamic view of their situation and talked about its evolution whilst others held a more static view of things, talking solely about the current situation of actors, relationships or events. This latter perspective resembles a picture that was taken at a specific moment and the respondent then holds on to that picture regardless of the issue, not being willing or maybe not able to change it.

Respondents with an evolving view had in most cases externally oriented functions. When these respondents had been in the business for a considerable period of time and had experience in different functions, they seemed confident of their knowledge, apparently being opened minded towards change and revealing a comprehensive view. On the other hand, respondents with an evolving view and that were new to the business, seemed motivated to know more about it since they were not quite sure about what was going on. On the other hand, respondents with a static view frequently held internally oriented functions. Also in this case it was possible to distinguish two different situations. Some respondents had been around in the business for a considerable period of time and considered that there was no need to change their views. These respondents did not seem to consider it important to know what was going on around them and thought that what they already knew was enough. There were some respondents that also held a static view but that were relatively new to the business. In most cases these held a rather limited view of what was going on around them and the time span of their view was limited to present situations and events.

**Focus on Past, Present or Future Events:** One other variation that was observed during this project's data collection regards actors' time focus. While some respondents placed greater focus on talking about past events, looking backwards to talk about what he/she saw in their surroundings, others chose to talk about the present situations while others look forward, thinking and acting on the basis of the future direction of situations and events.

Respondents that placed their focus on the past were usually those who had been working in the company for a considerable period of time. In many cases, respondents considered themselves as having a clear and comprehensive view of their surroundings. As a consequence, they were frequently stuck in talking about situations that took place in the past and seemed reluctant to change their views. In this case, respondents probably only select and interpret information coherent with this previous frame of reference. On the other hand, respondents that focused on the present period of time were mostly managers who had not been in the company for a long time or those who did not seem able to incorporate past experiences or to learn from them. In most cases, these respondents also seemed reluctant to change their view on their surroundings. Finally, respondents that placed greater focus in the future usually those associated with strategic and decision-making functions. The views held by these respondents were in most cases coherent with their companies' identity when the latter showed a predominantly strategic orientation and focus on future action. The majority of these respondents showed open mindedness towards the possibility of changing their view of the surroundings. They were more willing to take in additional information, even if it did not support the perception they had of the world.

**Specificity and Generality:** The IMP body of literature promotes research conducted at the Network level of analysis which in most cases includes a large number of actors or groups of actors. In conducting the interviews it was possible to observe that while some individuals talk in terms of groups of actors and general situations, others talk in more specific terms.

Respondents that spoke mainly about specific situations or specific actors could be grouped into two sets. The first set was predominantly made up of respondents who had a considerable experience in the company and in the industry as well as a broad experience performing diverse functions. In most cases, they had good access to information, were well informed and were willing to take into account other people's views. They seemed willing to change their views if that was the case and one may say that these respondents held a comprehensive view. The other

set of respondents was mainly formed by people who had a limited experience in the company and/or in the industry and they had never performed a function different from what they were performing at the time they were interviewed. They did not seem able to see beyond the particularities of their work. Their view was narrowed to functional related issues and they did not seem willing to change or enhance their views. The respondents that spoke mostly about general situations or groups of actors could also be grouped in to two sets of respondents. On one hand, there were respondents that had considerable experience in the company and /or industry and that had considerable experience in different functions. These respondents seemed able to find a common trend among situations and/or actors, took an overall view that they had thought about before the interview. Respondents from this first group seemed interested in knowing what were other people's perceptions and tried to know more about them. In most cases they seemed willing to change their views and since they were able to look at the whole, this was an indicator of broadness. Another group of respondents was identified, including those which had limited experience in that business. These respondents did not seem able to look at specific situations or actors as a result of lack of specific knowledge. Frequently, these respondents seemed to have problems taking other people's views and did not seem willing to change their view or to enhance it. This may be interpreted as an indicator of narrowness for those respondents' views.

**Egocentricity:** One of the IMP's underlying principles is that companies do not own their own Network. However, most people do tend to see themselves and their company as the centre of the entire process, placing focus on themselves or on their company and relegating the surrounding to a supporting role. Although this position may be considered as revealing a biased and restricted view, it is likely that position will form the basis of their interactions with their surroundings.

Respondents who identified themselves as the centre of the overall picture either placed focus on themselves or on their company. The respondents that placed their focus on themselves were generally performing internally oriented functions. Most of the time, they were confident about their own view and considered having a comprehensive picture. Their view was mostly not coherent with the company's identity. They held a personal or relational identity orientation, depending on the extent to which they spoke in the first person or in the name of the department or function that they worked for. If they had a personal orientation, they were using their personal traits as basis for evaluation, having as frame of reference the comparison with others and pursuing solely self-interests. On the other hand, if they spoke mainly as being part of a

function or department, then they held a relational identity orientation, and used the fulfilment of the role that is appropriate to their specific function or department as a “frame of reference”, pursuing not only self-interest but also others’ benefits (the function or department’s goals). These respondents did not seem willing to take in to consideration the view held by other people and most times seemed reluctant in changing their own view, not being able to see beyond their ‘belly button’. They were predominately task-oriented, holding a limited view on what was going on around them and not being able or willing to see a greater picture. There was a low level of commonality between these views held by these respondents and the ones of the remaining members of the company. Respondents that seemed placing a greater focus on the company had in most cases been in that particular company for a long time and had worked in diverse functions. Most of these respondents held a view centred on the company, identifying themselves with the company’s identity, and thinking of themselves as members of the social group called organization, reflecting a predominantly collective identity orientation. There was greater commonality between these views and those of the rest of the company that these respondents belonged to. Most of these respondents were willing to hear what other people had to say. These respondents held in most cases a relatively limited view, not being able to look at the surroundings.

On the other hand, respondents that held a peripheral view placed a greater focus on the surrounding companies and were in most situations associated with externally oriented functions (e.g. commercial director), and were people that had a considerable experience in the company and /or industry, having worked in several areas. Most of these respondents seemed to be willing to hear what other people had to say (people both from within and outside their company) and were willing to change their view. Most times they saw the company that they worked for as part of a set of entities and held that relations with and between these others should be taken into consideration when strategizing. These members seemed to have a broader view on what was going on around the organization and a more restricted view in relation to the internal organization.

**Explicit Pictures and Consensus:** Organizational identity (Hakansson and Johanson, 1994) is a concept underlying the IMP literature that is associated with the concept of strategic positioning (Hakansson and Snehota, 1995). An organization’s identity is about how the surrounding companies perceive that specific organization’s attractiveness as a potential partner. This attractiveness is a function of the relations that the company has with other actors. Organizations usually try to promote a particular identity so that it becomes an appealing counterpart for other

actors. In this research project the organizational identity we have considered is the one expressed at the board level.

Most of the respondents that presented a view coherent with the view underlying the company's identity held a clear view regarding what was going on in their surroundings. These respondents took the company's identity as their own and articulated it. In this case, respondents presented a collective orientation. However, in some situations, it was apparent that respondents would only articulate this orientation in order to be politically correct, or because they did not dare to challenge the company's policy. Most of the time, these respondents were not very willing to take into consideration other people's views, unless those views were according to the company's identity. In some cases, these respondents even avoid scanning some information that would potentially lead them to change their views. One may expect a high commonality among the members of a company in which views are coherent with the company's identity. On the other hand, most of the respondents with views that were not coherent with the view underlying the company's identity considered that they had a clearer view than the one corresponding to the company's explicit identity. In most situations, they also considered that they held a more comprehensive view than the one underlying the company's identity. In this case, respondents were either more willing to confront the other members of the company with their own view or, they may also choose, in some situations, to undertake the company's identity in order to avoid problems.

## **CONCLUSIONS**

It is difficult to write conclusions for a project that is still in the early stages of data collection. However, a number of points should be made, as follows:

The concept of Network Pictures seems to be a robust research tool. Working within this concept has produced a richness of data and seems to provide an insight into the different views of the world held by network actors.

The analysis framework has been evolved through a number of iterations and seems to capture enough dimensions of actor views to encompass the views of respondents and to show diversity.



This diversity of view has proved interesting. Actors seem not only to have wide diversity in who they see and what they see around them. But they also show diversity in how they look at their surroundings. In order to capture this diversity in how respondents look at the world it has been necessary to probe deeply in questioning them and to move beyond recording their “surface” picture.

Finally, the initial analysis discussed here has not attempted to make any link between network pictures and networking. In other words, we have not tried to analyse how respondents translated their pictures into actions. However, the interviews we conducted also included a number of “scenarios” in which respondents were asked what they would do in a series of hypothetical situations that related to their business. Perhaps analysis of these scenario responses will lead to some interesting findings on the link between perceptions and actions in business networks.

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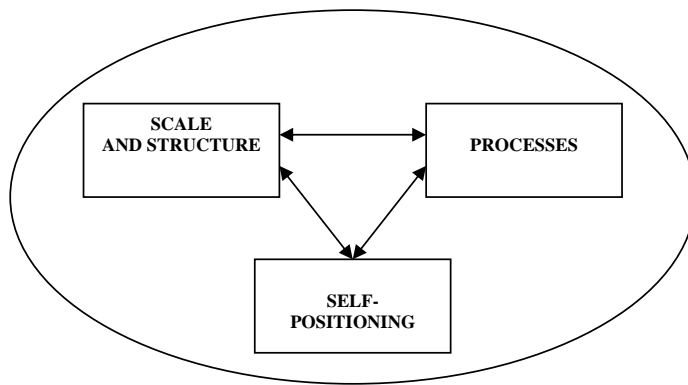
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Concept	Author and Year	Concept Definition (Collins Co-Build Dictionary)	Definition	Formattato: Giustificato, Interlinea 1,5 righe
'Network Theory'	(Johanson & Mattsson, 1992; Mattsson, 2002)	"A <u>Theory</u> is a formal set of ideas that is intended to explain something"	How the "actors"[...] view the (Johanson et al., 1992, p. 186); "the actors perceived mediated connections between relationships" (Johanson et al., 1992, p. 189); "the actor's set of systematic beliefs about market structure, processes and performance and the effects of its own and others' strategic actions" (Mattsson, 2003p. 417).	Formattato: Giustificato, Interlinea 1,5 righe
'Network Horizon'	(Anderson, Hakansson, & Johanson, 1994)	"The <u>Horizon</u> is the line in the far distance when the sky seems to meet the land or the sea"; " the limits of what you want to do or of what you are interested or involved in"	"how extended an actor's view network is" (Anderson et al., 1994, p. 4).	Formattato: Giustificato, Interlinea 1,5 righe
'Network Maps'	(Borders, Johnston, & Rigdon, 2001)	"A <u>Map</u> is a drawing of a particular area [...] showing its main features as they would appear if you looked at them from above "; "a drawing that gives special information about an area"	"map the networks in which manager's company participates"; "managers must collect information on all of the firms that play major roles in each network or value chain. What functions does each member perform for the larger network? How is each member vulnerable? Aside from the manager's own firm, what are the contact points between networks?"; "examining their own role within each network"	Formattato: Giustificato, Interlinea 1,5 righe
'Network Pictures'	(Ford, Gadde, Hakansson,	"A <u>Picture</u> consists of lines and shapes which are drawn, painted, or printed on a surface and show a	"the views of the network held by participant" (p. 5), forming "the basis for their analysis and actions" (p. 5);	Formattato: Giustificato, Interlinea 1,5 righe

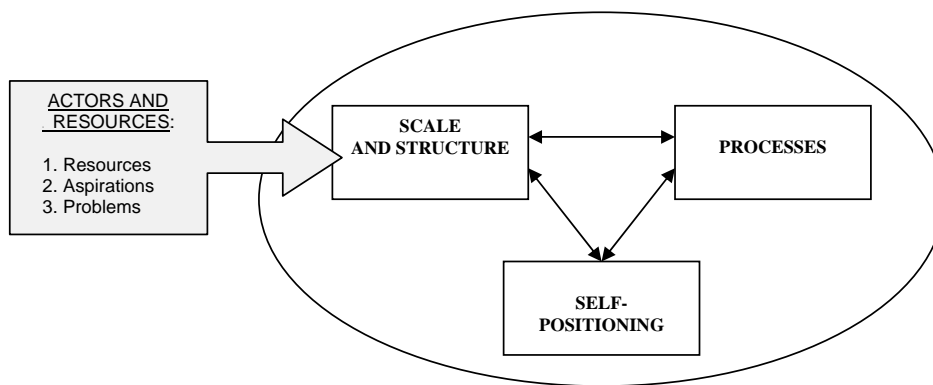
	& Snehota, 2002)	person, thing or scene”; “If you have a picture of something in your mind, you have a clear idea or memory of it in your mind as if you were actually seeing it”; “If you picture something in your mind, you think of it and have such a clear memory or idea of it that you seem to be able to see it”; “A picture of something is a description of it or an indication of what it is like”.		
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**Table 1.** Network Pictures and Previous Sense-Making Devices

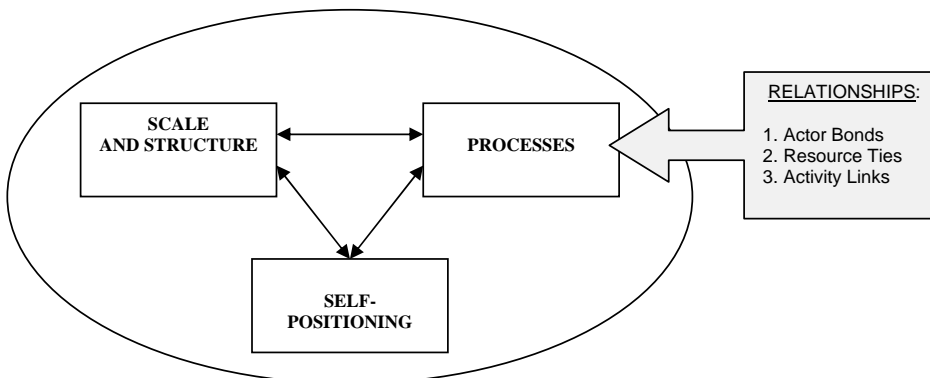




**Figure 1**  
**The Proposed Dimensions of Network Pictures**



**Figure 2**  
**Elements concerning the Scale and Structure of the Network**

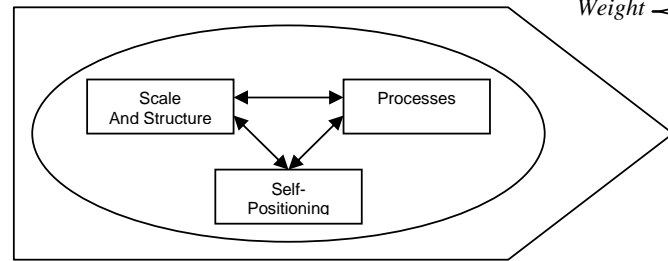


**Figure 3**  
**Elements concerning the Processes of the Network**



FIGURE 4

### Npics DIMENSIONS



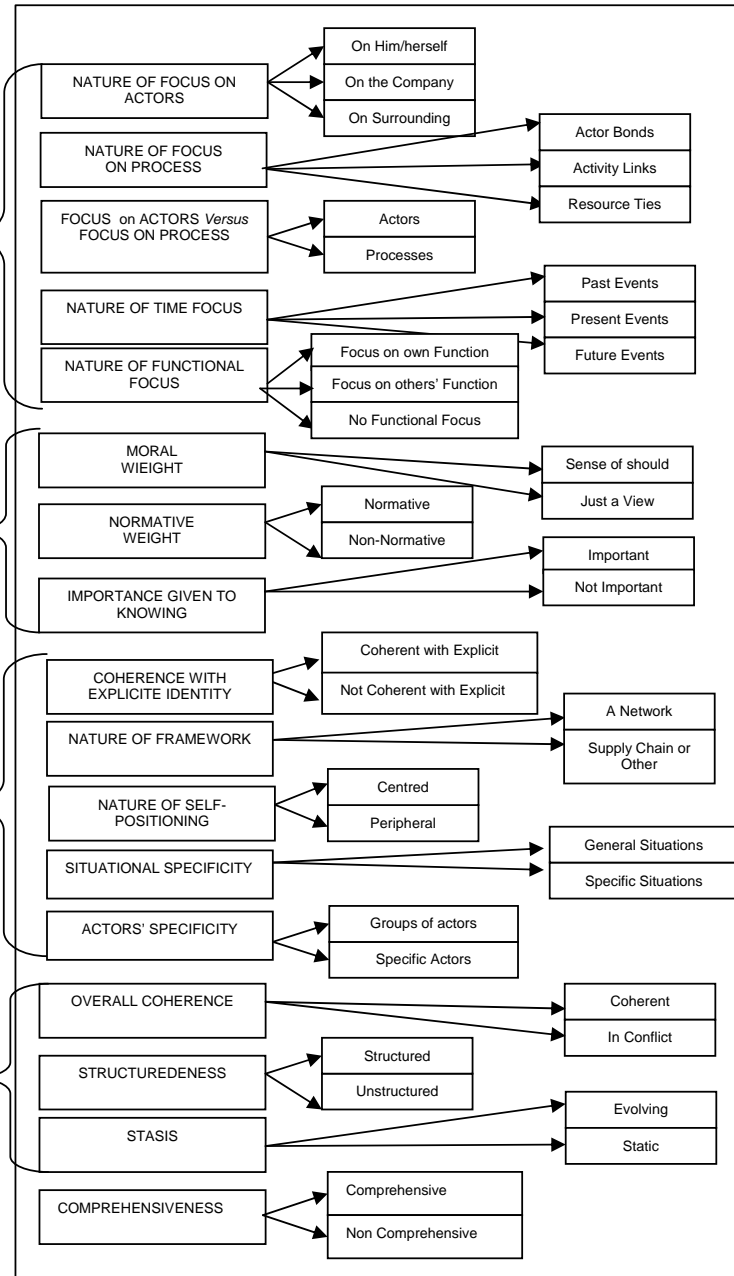
### Npics

*Focus*

*Weight*

*Content*

*Overall*



### Npics

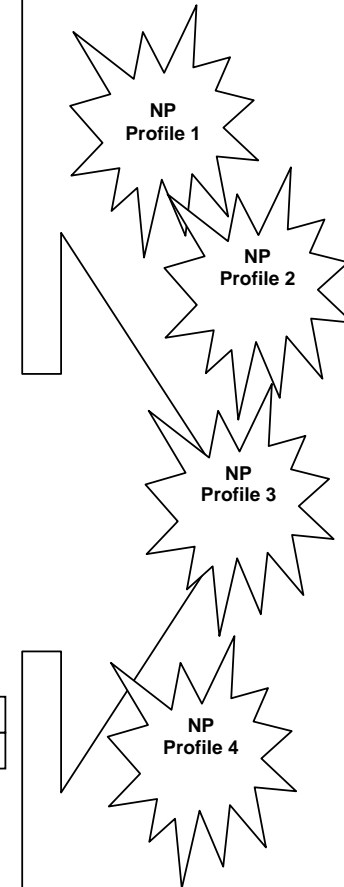


Fig. 3 – NPics Categories

