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Observations on Responsibility

with Special reference to Intermodal Freight Transport Networks

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PREFACE

'Action springs not from thought,
but from a readiness for responsibility'

Dietrich Bonhoeffer

Recently, the question of responsibility has been the subject of lot of interest and debate. This work will shed light on responsibility – and sustainability – in the context of transportation with a special emphasis on intermodal freight. This publication provides a subjective - and an impressionistic - interpretation of the concept of responsibility. It is a prelude with the target of encapsulating certain attributes that affect and explain the decisions and policies of responsibility. At the outset of the research, the decision was made to embrace the theme in a more general manner than to limit it to the examination on Corporate Social Responsibility (CSR or related acronyms and practices).

Environmental and societal concerns are based on the acts of many actors. Their behaviour is enabled and constrained by network structures. Indeed, responsibility has a collective character: it rises from the intentions and expectations prevalent in the networks. Actors are embedded in their surrounding with diverse actor bonds, which maintain relationships. The relationships are the major carriers of responsibility in structurally bonded nets.

The discussion on responsibility breaks down the traditional boundaries between diverse actors, thus challenging the conventional, well-established and pre-defined categories and models. Common interest in community-based development (whatever the communities might be) puts all the actors together regardless of their role, position, and intentions. Scholarly, new orientations - and conceptual proposals - are required. Reflective and speculative methods can stretch the limits of the horizons perceived by the observer. Examination as an *étude* provides significant tools to improve the methodological skills. Besides, if ethics as an ingredient of responsibility is under consideration, aesthetics cannot be neglected either.

I am fully aware that the research task would not have been possible to accomplish without the financial contribution of the Foundation of Economic Education (Liikesivistysrahasto). I am deeply grateful for this support.

Kouvola, On the Sunday of *Gregory Palamas* 2012 – the day when Kielo Sofia was baptised.

Markku Nikkanen

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ABSTRACT

Recently, the responsibility-related issues are the subject of incremental interest in the field of science and in pragmatic decision-making. Often the networks are more deeply analysed. The actors in the networks are often firms, or other organizations, but they can also be individuals, groups of firms, or people working together. Generally speaking, the research concerning network-like phenomena addresses an area of considerable contemporary interest. Despite the growing attempts in analysing intermodal freight transport (IFT) from a network perspective, the inherent research is still characterised by conventional approaches. Due to the limitations of managerial views (categorized as business-centric approaches in this study) in analysing complex, multi-actor networks, there seems to be need for complementing the traditional approaches with contemporary research proposals particularly if complex issues – such as responsibility – are under scrutiny.

The objective of this conceptual study is to discuss and examine the current trade-offs between economic, environmental, and societal issues among enterprises. Firstly, in this study three different basic orientations for analysing inter-organisational behaviour are presented and compared: analytical, system-based and actor-based approaches are discussed and contrasted. These perspectives are presented to reflect the dominance of managerial Supply Chain Management (SCM) and its theoretical underpinnings. To exemplify the potential of the anthropocentric and eco-centric research orientations some critical issues and controversies are introduced. The dialectical method employed, provides a basis for subsequent analysis. The theoretical approaches and conceptualisations are used to discuss responsibility and sustainability, particularly as associated with corporate social responsibility (CSR) in the context of IFT. Triple bottom line (TBL) model provides a theoretical framework for discussing deeply the major elements and dimensions of corporate responsibility (economical, environmental, societal), exposing some critical factors for examination. In addition to the major dimensions, aesthetics is introduced to provide complementary mindsets to facilitate understanding of the sphere of responsibility.

Following a theoretical discussion, some suggestions for further studies are proposed. Based on the theoretical framework, it can be claimed that despite efforts to integrate the environmental and societal policies, many actors (such as Logistics Service Providers; LSPs) will face substantial challenges in creating new strategic alignments and practical platforms. This is true particularly if the broad and deep content of responsibility is discussed. This is partly due to the fact the role

and position of these service providers is still a secondary one as compared to major players in a sustainable supply chain management (SSCM) context - particularly the shippers, and receivers. Moreover, the true inclusion of responsibility (and the trade-offs to be solved) in the major strategies of a firm is often a difficult task. Besides economic, environmental and societal dimensions, a conception of aesthetics can contribute to further examination of responsibility as well.

Keywords: Responsibility, Sustainability, Intermodal Freight Transport, Inter-organisational Networks, Dialectical Approach

1. INTRODUCTION

- *'Consumers and governments force business to accept social responsibility reshaping supply chain design ' (Patullo 2009)*

- *'…..intermodal sector has much to offer in this respect and far-sighted transport companies should understand that opting for intermodal transport solutions is a way of securing their own future.' (Livio Ambrogio, President of EIA 2009)*

There has been growing interest recently in the study and analysis of intermodal freight transport (IFT) from a network view or paradigm, both among academics and practitioners. Conceptually, a network comprises a set of diverse interconnections among and between actors. The actors are often firms, or other organizations, but they can also be individuals, groups of firms, or people working together. Generally speaking, the research concerning network-like phenomena in IFT addresses an area of considerable and growing contemporary interest.

When firms (or organizations) pursue network logic, they are forced to employ a quite a different logic in their business practices compared to traditional models. A real network is actually a constellation of various, overlapping nets, which are identifiable sub-entities of the entire network structure. Hence, interorganisational processes (e.g. exchange, co-ordination, adaptation) that are vital for mutual interaction, take place often on the 'internet' level (one particular net e.g. a social one *vis-à-vis* another net) instead of solely on a dyadic or network level. Conceptually, a network is a dim and unclear concept as the boundaries of the networks are rather blurred in nature. Subsequently, most of the partners have limited or no knowledge of all the partners in one specific network and so they cannot interact properly with these partners either.

A deep(er) and well-established network- based analysis should capture the rich diversity of features that characterize network/net engagement of actors: common interests and deep tensions, constructive and destructive elements in relationships are examples of opposite forces of particular relationships. It can even be proposed that a network as a set of diverse relationships can be characterised by dialectical means, exposing the opposite-driving and contrary forces which are actually expressions of vitality and continuity for the consistency of the relationship, though primarily they seem to disconnect a particular link leading gradually to total dissolution. As often noted (see e.g. Berger and Luckmann 1966), reality is a social construction, which means that every actor (whether a firm, a group of people, or an individual actor) has a limited ability to comprehend the multiple aspects of reality, especially when the latent features of the relationships – which may carry negative intentions - are under consideration. Traditionally, Supply Chain Man-

agement (SCM)- related analysis is poorly equipped to handle the rich nature of network relationships. In addition, the true involvement of non-business actors is not properly included in conventional SCM analysis.

The primary focus of this study - intermodal freight transportation - has been intensively analysed by numerous scholars (see e.g. doctoral dissertations by Woxenius 1998, Bukold 1996, Aastrup 2003, Nikkanen 2003, Sommar 2006, Lammgård 2007, Roso 2007, Floden 2008, Konings 2009, Comer 2009). Intermodal transportation has been conventionally defined as movement of unitised goods by at least two different transportation modes under door-to-door conditions. In addition, the use of Intermodal Loading/Transport Units (I(L)TUs like containers) is also required. On an analytical level intermodal freight is an interesting point of departure for intensive research work as according to recent estimates, by 2020 some 40 % of transportation on global scale will be intermodal.

The growing (as anticipated) share of intermodal transport (e.g. haulage of containers in seaborne traffic) has resulted in an increase in research work. In practice, studies often aim at explicating the problems, development areas and policies for increasing the IFT. Much of the inherent research work is characterised by conventional analytical orientations and methods, which means that pragmatic issues, e.g. processual interfaces and interoperability, development of terminal handling in transhipment points and integration of the performance of several carriers are predominantly in focus. On the strategic level the question of supply chain integration in transportation systems *inter alia* (between operators and operations) has gained remarkable interest (see e.g. Bagchi *et al.,* 2005).

This specific mode of transportation is interesting for analysing interorganisational issues, such as responsibility, as it can be assumed that IFT can be viewed as intermodalism, which implies a total logistics service offered by a network of different organisations. Accordingly, this form of combined transport can provide a testing ground for studying the dimensions and attributes of interorganisational relationships - and the features typical of them - more exhaustively (see Nikkanen 2003 for more discussion of this option). The required degree of co-operation is inevitably higher in the network of dependent intermodal operators than in situations in which single modes act in some loose collaboration. Hence, the scope of responsibility can also be scrutinised. There are tendencies and intentions in network engagement, which favour collective behaviour and joint-efforts - e.g. common risk-taking or sharing and division of responsibilities (which are often, however, legal and contractual obligations rather than voluntary or subject to interpretation).

There is no real intermodalism without the active participation of all the parties involved and without tight relationships (such as actor bonds) between the operators and other facilitators. The parties can be service providers (e.g. carriers, freight forwarders, transportation companies, port operators), agents, and customers (e.g. shippers, receivers), and also stakeholders (e.g. towns, regional associations, local communities), or others (e.g. customs, trade unions, regulatory bod-

ies). Neither can the potential intervention of local residents and their communities be neglected. Due to the abundant number of operators, operational IFT takes place in large networks (and in adjunct nets) with multiple numbers of actors. All of the participants may have different views of what is meant by responsibility: how to cope with it and how to carry out policies supporting it.

In addition to IFT, currently responsibility has also been the subject of a lot of scientific and pragmatic discussion and debate. This means that companies are more willing to adopt *voluntary* initiatives and policies to improve their records. The drivers, to name issues like rising prominence of sustainability (including e.g. supply and demand characteristics surrounding energy consumption), and increasing understanding of the science relating to climate change and greater interest for transparency, have caused more attention within the field of logistics research as well.

If related to firms, responsibility as a concept can be defined as the actors' intention to consider more properly non-financial and non-profit making aspects complementing their on-going business models, practices and strategies. Some scholars tend to underline how responsibility ensures companies willingness to comply with the laws and norms though this is quite a narrow-minded application view. It is presumed that the actors will always - unconditionally - obey the laws and norms. Corporate (Social) Responsibility (CSR) can be seen as a bundle of policies embracing the environment, stakeholders and larger communities with voluntary practices. Hence, the companies are willing to embrace triple bottom line thinking (TBL) with profit, people and planet equally in focus (compare to Fig. 7).

Responsibility has many different definitions and dimensions depending on the scope of application. Moreover, it is often not an easy task to find any difference between the key terms - responsibility and sustainability - as actors tend to use these concepts interchangeably. One cannot deny the fact that the discussion about responsibility is heterogeneous in nature. Firms and organisation have acknowledged the importance of corporate social responsibility as one of the means of increasing their profitability and success, not just for doing good. Some companies have been active in local relationships developing projects with communities (or organisations representing them) thus increasing the degree of regional involvement (by promoting also the idea that they act locally). Others pay attention to non-economic value-added activities, and even on philanthropy. The discussion on business ethics is wide-spread. To provide equal opportunities to all employees and even to members of local communities (including gender issues), can be of some importance to a few firms.

Gradually companies – such as Logistics Service Providers (LSPs) - are searching for options to integrate CSR-related policies more deeply into their business strategies. It is still worth questioning to what extent these policies truly contribute to the corporate- consciousness and willingness to redefine their activities, or does it rather encourage them for quasi-measures in terms of greenwashing.

2. SCOPE AND OBJECTIVES

The major purpose of this study is to analyse and examine theoretically the various dimensions of (corporate) responsibility in IFT networks, paying particular attention to environmental (ecological) and social determinants. The following sub-questions are identified as well:

- what are the current trade-offs between economic, environmental and societal issues in intermodal freight ?
- what is the role of triple bottom line thinking in IFT-related strategic decision making ?
- are there any established methods, practices and policies for consolidating the ecological and societal dimensions of IFT operations ?
- what are the (new) potential forms of the co-makership, dialogue, and communication between diverse actors in these networks ?
- is it appropriate to consider the management of responsibility and sustainability in the context of global IFT ?

One of the targets is to understand more properly the interaction between economic, ecological, and societal issues in the context of the study. This means that the relevance of corporate responsibility will also be scrutinized. In addition, the sphere of responsibility on a network level will be discussed. The study is mainly conceptual in nature.

To simplify the circumstances for running the IFT operations, there are actually two different networks (or nets), which are strongly interrelated: interorganisational and infrastructural. The first of these network structures results, when diverse actors expose themselves to interaction and create relationships. It is assumed that a relationship is a major carrier of the factors and forces influencing responsibility in a particular network. Indeed, the network influences are first transferred and later adjusted and absorbed through these relationships. This means that the question of responsibility is widely a network phenomenon (*inter*-organisational) rather than strictly related to a single actor (*intra*-organisational). Therefore, responsibility has a strong collective, not only individual, character. Sharing the responsibilities is obviously one of the major features in explicating the collective nature of responsibility.

2.1. Structure of the Study

To provide a solid basis for examining the major objectives, a theoretical discussion on the orientations in analysing intermodal freight transportation is conducted. Hence, this study aims at consolidating the conventional analysis and newer orientations by making some proposals, which may provide - not just complementary - but also new theoretical angles for conducting research work (though minor in scale). Therefore, it is proposed firstly that there exist three different orientations (analytical, system and actor-based) that have an impact on the research of IFT (see Chapter 4). Certainly, the approaches also have an impact on the discussion of responsibility. Later, these distinct views will be supplemented by some new ideas. In the research work, it is also suggested that conceptual controversies can increase the consistency of the study.

Generally speaking, the methods for refreshing the traditional research methods – such as dialectical approach/method - can provide some theoretical and conceptual guidance in the entire research process (see particularly Ch. 3). One cannot deny the fact that in this research work, divergence e.g. in terms of conceptualisation is somehow present throughout. It is assumed that by this, more understanding of the divergent nature of the suggestions is gained.

Probably, the attributions of the key concepts of this study are not well-established in current business rhetoric. Hence, with the help of bi-faceted concepts (e.g. role-position dualism), some tools are obtained to discuss the multifaceted reality. Undoubtedly, the interest in introducing contradictions has implications: it is suggested that concepts that are used can often include two (or more) opposite dimensions, which have turned against each other (because of the difficulty in consolidating the terms properly). Initially, the tension caused by the irreconcilable nature of the dimensions will keep them separated, even isolated. Then they will be merged. The idea of dialectical method can be seen throughout the study (related not just to the major concepts of the work like role-position, but also to net-network; even the triple bottom line proposal).

Indeed, this dialectical thinking (as introduced and presented in subchapter 3.3.1) breaks down certain well-established descriptions (an inherent conceptions), and stretches the limits of the research area. Later, however, it is supposed that the opposites can gradually merge to great(er) unity through the concept of harmony. The harmony includes implicitly a method of how the various pieces and elements can be consolidated theoretically (see chapter 3.3.2) and as related e.g. to a particular relationship. It is to be hoped that the result is both more pleasing and more consistent.

The responsibility- related issues (such as philanthropy and risk management) are presented more accurately in Chapter 5. The current criticism against CSR is summarized in sub-chapter 5.1.5. The examination relies on the use of the triple bottom line- model (see Fig. 10), which is the general framework of the study. It is

also assumed that aesthetics (indicating something harmonious), as part of CSR (discussed in subchapter 5.1.4), can give ideas for creating a conceptual balance between the issues under scrutiny.

Ethics, though not explicitly, is present as it is an essential part of CSR. Hence, aesthetics is not transcendental, but visible and concrete. As Wittgenstein claims, *'ethics and aesthetics are one'* (Wittgenstein 1922, TLP, 6.421; for him, though, ethics was transcendental, probably because it cannot be explained truly linguistically nor formally). Hence, ethics and aesthetics need to be discussed closely. The elements of eco-efficiency are introduced and discussed briefly in subchapter 5.2. Finally Chapter 6 and Chapter 7 (Epilogue) wrap-up some findings and offer guidelines for future attempts in the field of research.

Undoubtedly, the challenge of this study is to explicate concisely the diversified, even contradictory efforts and policies (and respect concepts) the actors may have in their network behaviour. The attempt is characterised by the writers own, so to speak, subjective efforts. However, it is strongly argued that the study is based on the norms of scientific verification, not of versification.

3. CONCEPTUAL CONSTELLATIONS AND CONTROVERSIES

Network involvement implies organisations intentions for working in closer co-operation hence aiming at capturing positive yields and rewards, but also exposing themselves to risks as well. Reduced independency, threat of opportunistic behaviour and asymmetry in terms of power exemplifies some negative effects of the network presence. Therefore, a single actor is obliged to cope with all the effects of the network presence whether the influences are positive or negative. Even explicitly, a single relationship that links two partners together on dyadic level includes aspects of co-operation, competition and conflicts.

Discussion on diverse and divergent features links the present analysis to trends of the modern sociological thinking. Sociology is actually a study of human interaction, which takes place on distinctive stages (dyadic, system, net, network, or even society). However, there are different theoretical approaches as well: according to Burrell and Morgan (1979) sociology of regulation and sociology of radical change also exist. The regulation type of sociology provides explanations of society of which unity and cohesiveness are typical. If this serves a starting point in analysis, the questions of consensus and e.g. social integration are under scrutiny. The other type of sociology – categorised as radical change – refers more to social conflicts, which means that contradiction is prevalent and accepted when the conformities of the society are evaluated. These features do not influence only the society itself (as an organized entity) but also the explanations. However, the simple classification includes all the cons of the simple reductionistic dualism, which means that these two different orientations are rather contiguous in relation to each other rather than totally separate.

In this subchapter, primary conceptual constellations for analysing responsibility in IFT are discussed. These constellations and clusters are sufficiently similar ideas and terms (but also juxtaposed), which can create a basis for the subsequent study. The basic terms, which are the primary tools in the analysis and discussed prior to others, are role-position and net-network- constellations. These concepts, though theoretically close, are somehow subject to inversion as it can be assumed that a character of one specific attribute (in one specified concept) can be transformed to another. A single entity therefore can entail two supplementary, but also contradictory characteristics. Parallel to these dualistic propositions, the power of juxtapositions can also be seen as an idea to characterise all of the entire network relationships.

The contradictory elements and the dialectic nature of explanations that are presented in this study, are based on the idea that a single proposition (e.g. role vs. position) is somehow both the case and not the case at the same. Occasionally, in the theoretical argumentation the presence of contradictions will be systematically eliminated and dismissed *a priori*. It is, however, to see that these contradictions in this sense involve a purely logical relation between statements and proposals. The strength of argumentation is based on the revelation of contradictions and therefore they do not weaken the reliability of the study. Often - e.g. in the notion of collective responsibility – the controversies are actually proving a solid base for analysis. Therefore, dealing with controversies (by means of dialectical approach) can be an excellent point of departure for current analysis as well. Finally, one cannot deny the fact that there is a strong contradiction even with the basic elements of this study: as we'll see in later chapters it is very difficult to find a well-established balance between economic, societal and environmental issues.

Logically, contradiction is a simple term: it is a conjunction of a proposition and its denial. Accordingly, if one is false, the other is true. More specifically, when dealing with contradictions, a distinction can be made between two primary connotations the term possesses. Conceptually, the term can refer to relation, which exists between two distant terms. It is assumed that two binary categories exist: an assertion and its negation. Presumably, this definition is on the deepest and most abstract level of semiotic network - as Greimas and Courteś (1979, 60-61) suggest. They also claim that contradiction can be also a relation, which is established as a result of the cognitive act of negation. This can occur between two terms of which the previously - positioned first one - is made absent while the second term becomes present. Hence, the presence of one term presupposes the absence of the other - and *vice versa.*

The contradictions result when differences and isolated entities are *'pushed to their logical extreme*' (Burbidge 2008, 54). Two opposite characteristics come to be affirmed of the same thing in the same respect though each of the contradictions is independent and at least partly invisible. In the Hegelian way of thinking, contradictions are actually signs we need to take for granted. They serve as intermediate stages on the way to a more adequate explanation. Hence, conflicts occurring when contradictions are uncovered do not indicate that there is no proper option to continue with the chosen course of action. They rather encourage the researcher to more courageous endeavours.

The absence of that something (e.g. invisible but immanent negations to those visible concepts widely-applied by managerial rhetoric) is - unfortunately - quite typical for the conventional business-related language. On the other hand this, if any, calls for more serious attempts to conduct divergent research work. The researcher should be committed to reveal that absence. On the other hand, this is supposed to be the primary task of the entire scientific work - as Hinde (1997, 15) wisely remarks *'science tends to grow like an Amoeba, putting out pseudopodia now here*

and now there to engulf areas of ignorance, but rejecting indigestible fragments and avoiding areas uncongenial to it.'

3.1. Role-Position

Role and/or position and the strong dualistic coherence of the term can be valuable tools for analysing a carrier's engagement and their responsibilities in a network. With these terms, both the stability and dynamics of networks can be incorporated in the conceptual analysis. In previous studies, the suitability of the role-position- concept/s has gained considerable success (Aastrup 2003, Nikkanen 2003). Due to the research work conducted earlier, these basic concepts are not explained in this study in a comprehensive manner (see. e.g. Anderson *et al.* 1998, Aastrup 2003, Nikkanen 2003, Nikkanen 2005 for more discussion).

The intricate and virile nature of the role/position concept(s) in the inter-firm (inter-organisational) context can provide a solid basis for future analysis. The dualistic nature of this concept is depicted in Figure 1. In this visualisation a net *vis-à-vis* a network is also presented.

As regards the concept of organisational role, it can be an illustration of dynamical aspects in a network. Actually, the term role can refer to an actor's intentions in some specific network. The term role is closely associated with the concept position as there is a strong interplay between these two terms, which actually expresses two facets of the same concept. Role can be characterised through the actors' will, subject to an ideal and attainable organisational location in the network of tight relationships. This attempt is, however, often constrained by expectations generated by others (Nikkanen 2007).

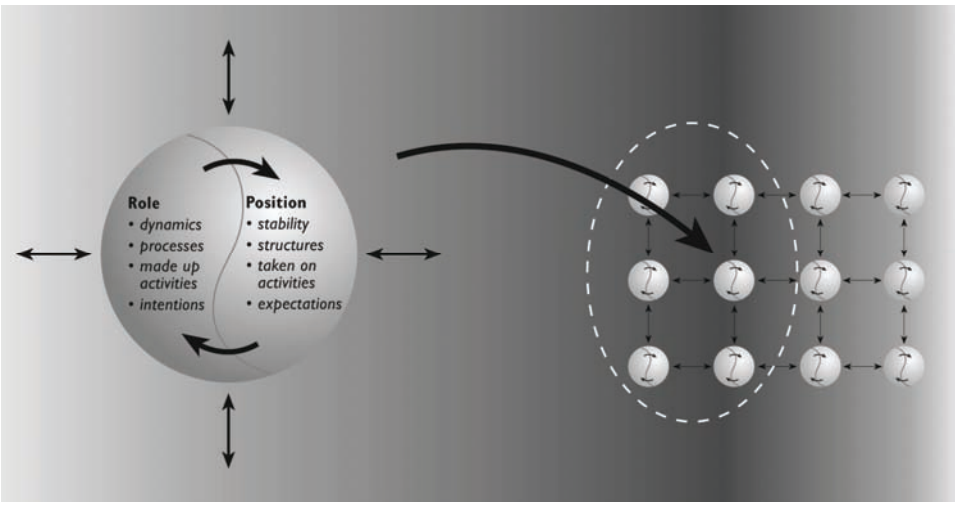

Figure 1: Dualistic Nature of the Role-Position and Net-Network Concepts

The term position refers more to stability and is in close conjunction with the organizational power. Indeed, position can be perceived as a location of power to create and/or influence networks. Accordingly, a position is dependent upon the power of the actor (company) relative to other participants in the focal network. Thus, the critical question is to what extent an individual actor can control the resources and activities of the other actors. The control over resources is an initial point for assessing the power basis and furthermore the means of power (e.g. activities to influence others, threats, promises). Position is often explained by identifying the market share of a company in some specified business area (e.g. in container transport): the greater the market share, the better and stronger the position is supposed to be (because this e.g. gives a certain relative bargaining power over the others).

By combining these two terms, it is possible to capture not just the dynamic aspects of the network behaviour (as evident with role) but also the impact of the structural elements of the network on a single actor (as with position). Both of these incorporated terms are needed to understand the development and dynamical aspects in every network. The intentional strategies of one or more actors for more responsible behaviour can cause new dynamics in the network to interfere with the current *status quo* (despite of the voluntary nature of diverse activities).

In current research, there are plenty of examples of analysing actor roles (e.g. of service providers) in integrated transportation networks. Analytical discussion often reveals multiple operators (roles of integrators or consolidators, Third Party Logistics service providers (TPLs), megacarriers) with little interest in railway companies or IFT networks. Therefore, particularly in intermodal freight transportation, there seem to be an indispensable need to cope with interorganisational themes, such as relationships, revealing the benefits of the actor-based orientation.

Despite the efforts made by several researchers, there is still a problematic task awaiting the scholars for explicating concisely the role-position- coherence/divergence. Regarding the practical verification, it is a challenging task for the researcher to analyse the term/s comprehensively in some specified network. As Aastrup (2003, 122) puts it *'(...) the concept of position may involve several underlying dimensions (i.e. resources and resource dependencies as well as expectations and roles) making it hard to define the concept in operational terms.*' Moreover, instead of aiming to explain the term/s, attention should be paid to other interests: *'it makes more sense to ask what the concept of network position directs our attention to and what operative phenomena to measure, identify or explore network positions through*' (Aastrup 2003, 130). In this study the major emphasise is on verifying the (collective) responsibility of particular actors, which are engaged in their own net(work)s. Hence, it is claimed that the responsibility-related policies and ambitions of these service providers strongly stem from the roles and the positions the actors may have.

3.2. Net-Network

Network as generic term is problematic as it is very difficult – if not even impossible – to depict explicitly its content and ultimate scope. Therefore Gadde and Håkanson (2002, 184) claim that *'there is no natural network boundary – any boundary is arbitrary'*. As such, there is no single objective network to be defined unilaterally. This means also that is not possible to delimit the network appropriately as every boundary is artificial and there is thus subjectivity in defining boundaries (Ford *et al.*, 2003, Parolini, 1999). Accordingly, networks are actually borderless. The dynamics in analysis stem from the fact that a researcher should always question the boundaries of the phenomenon in their scientific work. Hence, sensitive methods are required to create a clear picture of a network, and subsequently to model the network structure, due to the heterogeneity of the network actors and the infinite number of relationships (networks as sets of relationships rather than sets of firms).

Although there is coordination between the actors of the net(work), the description of how firms actually pursue network logic is difficult due to the complexity of the fragmented structures caused by dispersed and overlapping nets. In order discuss the networks, whatever the approach is, it has to be accepted that conceptually a rather unclear and dim concept is under scrutiny. The distinction proposed here is not well-identified by practitioners either. Nevertheless, Borgatti and Li (2009, 8) encourage the research work as they point out that *'network measures are constructed with one of these images* (they use a dualistic distinction between a net and a network) *in mind ....(...).. It is not a question of what the right definition is, but what is useful in a given study.'*

From an analytical point of view, the network as a conceptualisation should not be a vague term for an indistinct block of firms working together. In order to describe network structures concisely, a limited and specified set of firms (actors) can and should be examined. As such, *nets* are useful as they can be seen as smaller units of the entire IFT network and they *'provide a lower level of analysis'* as Easton (1992, 18) puts it. In this study net/s - instead of entire network/s - are discussed more accurately. Most firms - like LSPs in their IFT - have only limited knowledge of the final users of the services or products generated jointly by the net(work) members. They work together with counterparts in some smaller unit, with whom they have usual a close organisational and/or geographical proximity. The net/s of this study can be defined as focal nets. Often, as already noted, focal nets are also local nets.

Indeed, focal nets are often territorial or geographical, but they can contain attitudinal and cognitive dimensions as well. This implies that, instead of using a specified method for boundary-setting, perception of appropriate relationships can be a key element in defining the limits for some particular net (Nikkanen 2003). Hence a focal net is a consolidation of relationships - net of direct and indirect interorganisational relationships that the focal firm perceives. Accordingly, the bounda-

ries of the focal net/s are identified by the focal firm itself. Moreover, occasionally a focal net has just limited correlation with physical proximity. A focal net can be understood as a company's (or management's) perception of its context that is within its network horizon more than a freely chosen group of actors. The nets, generally speaking, can be defined as strongly bonded relationships between the actors. A great number of actor bonds between the participants and their obvious strength imply to the existence of a focal net.

Indeed, besides the coverage of relationships, in a focal net the breadth and depth of interaction (causing positive and/or negative perceptions) can also be an expression of the state of the relationships, thus indicating the existence of a net. Borgatti and Li (2009, 8) use the following correlation to describe the quality of some particular net (they term out these as 'egonets'):

$$q_i = \sum_J x_{ji} a_j \qquad \text{where}$$

q_i = the quality of ego i's (focal actor) network,

a_j = score assigned to a supplier j on an attribute (e.g. reliability, quality), and

x_{ji} = indicates whether (or how much) j supplies ego i.

As opposed to sum (which is a result of this model), average sums can also be used for comparing different nets. In addition, variance or standard deviation of scores may also be of interest particularly if gradients are to be analysed. The contribution of the presented composition model is that it provides guidance of how deep (also how important and multiplex) and strong the relationships can be in some particular net. Hence it can be assumed that in a focal net the questions of responsibility are influenced by the depth and importance of relationships. Actors do not perceive and handle responsibility equally through all the relationships (strong or weak) but rather consider the potential (anticipated) positive responses and gains through the most important ones - those prevalent in a focal net.

Competition, which traditionally took place on inter-supply chain/inter-network level, will be more often rivalry on 'internet'- level. This new type of structural competition can also be an advantage for actors. The newly organised net(work) s (and newly-defined roles and positions, respectively) can provide a solid base for new strategic initiatives (for responsibility, as an example) and resource alignment as interfirm resources and capabilities *'are socially complex, causally ambiguous and historically grown and hence particularly difficult to imitate by competitors'* (Gold et al. 2009, 34). The nets – not the networks – absorb the various strategies and policies of the actors.

As mentioned, the essence of focal net/s is in the fact that boundaries (defined through perceptions of the major relationships) actually can limit the extent of collective responsibility too. The questions of macro-responsibility (actors' interest in handling e.g. poverty, lack of democracy, or civil rights) are often beyond the scope of interest as they are not prevalent in their focal nets. Certainly, there are a lot of diverse, partly overlapping nets, in which the focal actor is continuously engaged and embedded. Hence, a single actor - through diverse relationships - is simultaneously present in different realities, implying the presence of multiplexity. Inevitably, all this influences the scope of interest of accountability as well.

3.3. Immanent Features of Responsibility: Quest for the C's

3.3.1. Dealing with Contradictions and Confrontations - a Dialectical Approach[1]

As already noted, firms, organisations and persons representing actors create and maintain (business) relationships e.g. in order to improve the conditions for higher performance, increased efficiency and better profitability. Accordingly, with network engagement the actors predominantly look for positive features. There is an emphasis on benevolent, co-operative behaviour, which means that the actors aim at mutual, rewarding goals addressing an intentional and voluntary view of human nature (Tikkanen 1997, 595). These features, if any, indicates how strongly the responsibility is associated with the roles and positions the actors may have in their networks. The rewards, however, are assessed predominantly by estimating the financial benefits: *'profitability tends to become the subject, it becomes the raison d'être of all economic relations* (Scott 2007, 33).

Nevertheless, in a dense network, a single actor is faced with several harmful and negative effects as well. As regards burdens and threats, e.g. loss of control (unruliness), resource commitment, undeterminedness (misdirected actions), exclusiveness and stickiness (the firm becomes connected with a whole network of other firms through a particular relationship) are among those typically present. Even deleterious effects can be revealed. Policies targeted for better eco-efficiency can also be regarded firstly as negative for the firms' financial performance, at least in the short run. On the other hand, environment-friendly performance cannot be achieved continuously without considering the drawbacks as well. These features, though often invisible in net(work) relationships, also affect the decision making policies the LSPs may have. The threat of the potential win-lose game among net-players in sharing the non-contractual responsibilities (and rewards) can be negatively encountered by actors.

As already mentioned in Chapter 1, reality can be interpreted as a social construction, which means that every actor has insufficient capabilities to understand deeply and comprehensively their outer (or as with human actors - not even the

inner) reality. Despite the apparent trust manifested openly (having visible appearance) between two collaborators, there can be e.g. a seed of mistrust or suspicious behaviour as well. Net(work) members may not rely on the responsible behaviour of the others as they cannot see or understand the motivation to behave in a certain manner. Because network-related issues are often more inter*personal* than purely inter*organisational* by nature, normative discussion on the content of smoothly functioning relationships and their formal character of neutrality (even reciprocal harmony) conceals the strong influence of personal attitudes and their hidden subversive nature. This is presumably also true also for personal attitudes towards responsibility.

From the analytical point of view, in relationship studies there seems to be a trend to address mainly the positive side of interaction in terms of discussing responsibility and inherent terms like trust, commitment, and open communication. Hence, the impact of the 'other side' (revealing the real scope and intensity of incredulous and even deleterious forces against more responsible behaviour) for relationship development is often underestimated. Though a dialectical approach can be used variously (it can also refer to certain logic in the research processes), it can provide a method to reveal the 'other side' of an issue under scrutiny. The responsibility-related studies, such as those using triple bottom line thinking, include several contradictory elements causing tension - not just for the policies – but for analytical attempts as well.

To wrap up, and considering the major objective of this study, it is proposed that a dialectical method can be used to open new paths and to better understand certain essential elements in research to name *network relationships, structures (also social ones), analytical processes (including the logic), objectives of responsibility (including the dissonance), and policies*. Hence, the discussion is close to original interpretation of the term: the work 'dialectic' in ancient Greek actually refers to the art of debate and conversation.

Indeed, there seems to be a need to analyse the idea of a dialectical approach in order to understand the conformities of inter-organisational behaviour by contrasting adversarial, dissensual and consensual features in inter-organisational relationships and subsequent processes. It is proposed that a network as a set of diverse relationships can also be characterised by dialectical means, exposing the opposite-driving and contrary forces, which are actually expressions of vitality and continuity for the consistency of the relationship, though primarily they seem to disconnect a particular link leading gradually to total dissolution. It can be assumed that a sturdy analysis of one particular phenomenon (e.g. the creation of mutual trust in a relationship between actors) requires tenacious measures for analysing the utmost opposite side of that phenomenon as well. There seems to be a dualistic and invisible balance between the extremes, despite the obvious incongruence. The revealed contradictions are inseparable. With the help of juxtaposition, often implying dualism, the researcher can gain new insights into understanding the overall nature of the relationship as well – both its positive and negative dimensions.

This may lead first to dynamic disequilibrium in that relationship, but it later triggers new efforts to change the stability of the current *status quo*. This is interesting point of view as the word 'dialectics' in its classical expression refers to *'transformational dynamics',* which first appeared in written dialogues (Heim 1996, 25).

Despite the fact that dialectics can be also a rather neutral word and/or practice (originally referring to discourse, discussion even to debate), the dialectic procedure addresses contradictions, conflicts, and strong disharmony, complementing the idea of benevolence and harmony in relationships. Particularly when examined mainly as a social phenomenon, dialectics can be summarised by the following three entities (modified slightly from Arbnor and Bjerke 1997, 162):

- unity and struggle of contradictions. Contradictions condition each other and bring meaningfulness to the poles; this requires effective use of polarizing concepts.

- transition of quantitative accumulation into a new quality. By using some strong metaphors as a starting point, Arbnor and Bjerke here refer to quick changes into completely new qualitative configurations.

- everything undergoes development and becomes its own contradiction. To generalise this it can be assumed e.g. that trust converts intrinsically into distrust, development in the relationship may be incrementally changed into dissolution. Subsequently, the conceived negation is later a basis for the next stage in relationship development (e.g. for a re-orientation).

Arbnor and Bjerke (1997) use this three-wise procedure to explain the links between the features in the above-mentioned explanation: the theoretical start requires first a struggle of contradictions, which leads – with the help of accumulation of everyday language – to a new quality (descriptive and ideal-type languages as a result), which will negate what was originally given. Finally, the development leads to its own contradiction.

In the dialectical model created by Hinde (1997), two distinctive features are assumed: first, relationships exist only between successive levels of (social) complexity (e.g. interaction--relationship), but *not* between non-successive levels (e.g. individual-intergroup). Second, each level has properties that are not appropriate to the level below and requires specific explanatory concepts. The second assumption is often implicitly noted in research work, though not commonly accepted (see e.g. Nikkanen 2003 for more discussion).

Some philosophers have already increased the knowledge and power of juxtapositions: Socrates and his method of deep cross-examination and Plato's dialectic aiming at achieving the highest knowledge are some of the first attempts to use the idea. Engels' theory of dialectic materialism and dialectic model of history is a well-known example of how to express of the logic of the dialectical processes in

general: Fichte was the first to present the triad which was lately supported by Hegel. Indeed, according to Hegel there is a triadic interplay between thesis, antithesis and synthesis or as he puts it: *'the evolution of ideas occurs through a dialectical process - that is, a concept gives rise to its opposite, and as a result of this conflict, a third view, the synthesis, arises. The synthesis is at a higher level of truth than the first two views.'* This Hegelian process of change implies that a concept (or its realization) can be fulfilled by its opposite. Undoubtedly, this also includes a critical investigation of the process itself. The logic of the Hegelian thinking (so called back-and-forth process) is presented as follows (Table 1, source Vuorinen 1996, 233).

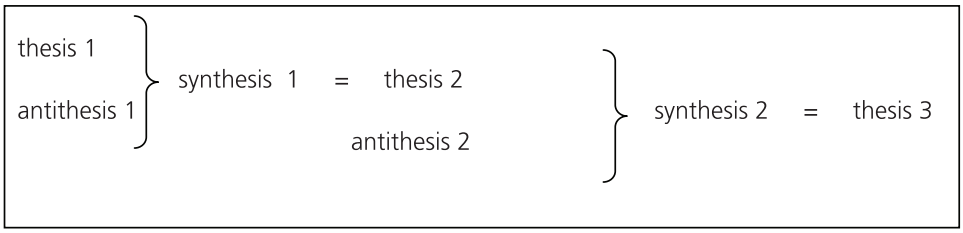

Table 1. The Rise above Opposites and Contradictions: the Mechanics of Hegelian 'aufheben'

Key: the verb *aufheben* cannot translated appropriately in English; probably words like to deny, to neglect, or to contradict - or to sublate – can give an impression of its content; (Vuorinen 1996); a concept *category* may refer to its opposite, or to the contradiction which leads eventually to more comprehensive category

More accurately, the Hegelian dialectics are based on some basic concepts. First, everything is transient and finite, existing in the medium of time. Second, everything is made out of opposing forces/opposing sides (contradictions). This may lead to gradual changes which ultimately lead to turning points, where one force overcomes the other (quantitative change leads to qualitative change). Finally, it is assumed that change/s moves in spirals, not circles. This is sometimes referred to as *'negation of the negation*'. The Hegelian view of reasoning implies that whenever thinking pushes the clear understanding of a term (or state of affairs as well) to its limits, its contrary is evoked. Subsequently, the opposition that results can be solved only by some kind of reflective or speculative consideration of the total picture. This method reveals (or more likely aims at doing so) the immanent contradictions. Hegel thought that all the logic followed a path, in which the internal contradictions were transcended. This, however, gave an option for new(er) contradictions that themselves required resolution (see Burbidge 2008 for more discussion).

Dialectics can also be employed as a method of reasoning that aims at understanding change and interconnections with their opposite and contradictory sides. The dualistic worldview also is recognized in some political worldviews and some theological disciplines: e.g. the gnostical interpretation of the transcendental world strongly addresses the dualism and sharp difference between the 'Go(o)d' and 'bad'.

The following illustration (Fig. 2) depicts different approaches for studying inter-organisational behaviour and subsequent relationships, also exposing the idea of dialectical method as a starting point in analysis. It is also assumed that organizational behaviour is influenced by the roles and positions of an actor in a network. Moreover, the responsibility-related issues (like policies) are often reflections of the specific roles/positions the actors may have.

In addition to conventional, managerial stimulus-response type of explanations offering a suitable path for deeper discussion (indicating proactive and reactive measures with (B) or without intervention (A)), the interaction-based approach (C) aims at combining several contradictory aspects in relationships, such as co-operation, competition and conflict, which can be present simultaneous-

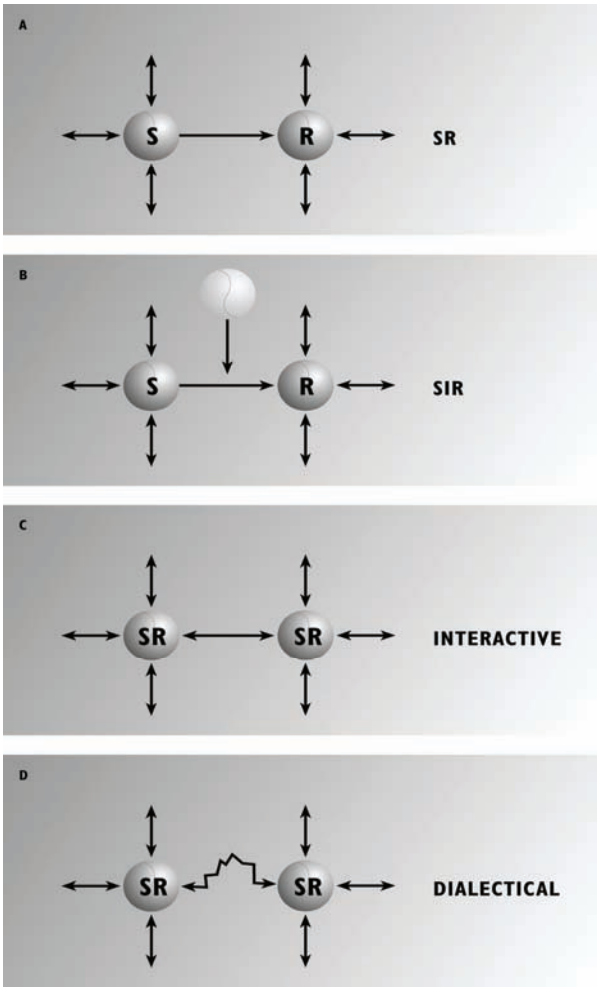

Figure 2: Different Explanations for Analysing Inter-organisational Relationships

Key: S = stimulus type of action, R = response type of reaction, I = intervention (by e.g. third party – like a LSP - in a triadic net in setting B)

ly. As related to responsibility, it can be assumed that in a setting A, the '(pro)actor' (through the dominant role) can stipulate the rules and norms for others (the 'reactors') to handle diverse policies in an expected manner – like those related to non-profit making strategies.

However, the network theories are based on the idea of benevolent and mutually rewarding collaboration. Hence, not just in well-established business jargon but also in scientific analysis the rhetoric is often obtrusively positive, approaching the other side faintly (e.g., lack of trust, not deep suspicion, is the opposite of trust). The major focus in pragmatic analysis, is too often too narrow because the positive and financially rewarding effects of the network engagement (and responsibility) are so highly emphasised.

As regards the dialectical explanation (D), the role and position of a single actor in a network are essential in understanding the attributes of e.g. the conflicts. Most networks are constantly unstable e.g. in terms of power, which means that one leading player's arrogant dominance over the others might force the others to make coercive adaptations, which are subsequently perceived in a deprecating or antagonistic way. The follower- type of actor (in terms of organizational responses; setting A in Fig. 2) perceives these situations negatively, and if no appropriate conflict resolution methods are evident, this will lead to an open or hidden clash later.

In the dialectical approach, it is assumed that exposition of strong contradiction can be valid in the analysis, when the true content of relationships is viewed. The concepts that are under scrutiny (e.g. responsibility and the policies supporting it) cannot be proposed without considering 'the other side' of the 'things'. There can be no appropriate portrayal for a single concept without considering the forces and activities which may lead to negative perceptions. They can finally lead to total dissolution of some particular relationship. In other words, a concept which is created to describe a certain phenomenon (e.g. responsibility) should include its own contradiction. Somehow the concept that is studied by a specific wording, should actually give space to explain the opposite negation as well.

It is thus postulated that every phenomenon that is studied should explicitly embrace its contradictions as well, both on conceptual and process levels. Without true understanding of the other side/s, the subject that is primarily under consideration – such as responsibility - cannot be understood either. Thus strong duality can be seen as a means of discussing dialectic relations where ever they exist. The major stimulus for dynamics in relationships is often included in the strong tension and dualistic balance that appears openly or is hidden in many forms and is prevalent in every network relationship.

Figure 3 explains the development of a particular relationship through time, also expressing how strongly these relationships incrementally embrace the tensions and conflicts (original presentation by Ford *et al.* 1998 as a basis). Particularly at the stable stage, *both* harmony (and concord) *and* conflicts (discord) are present.

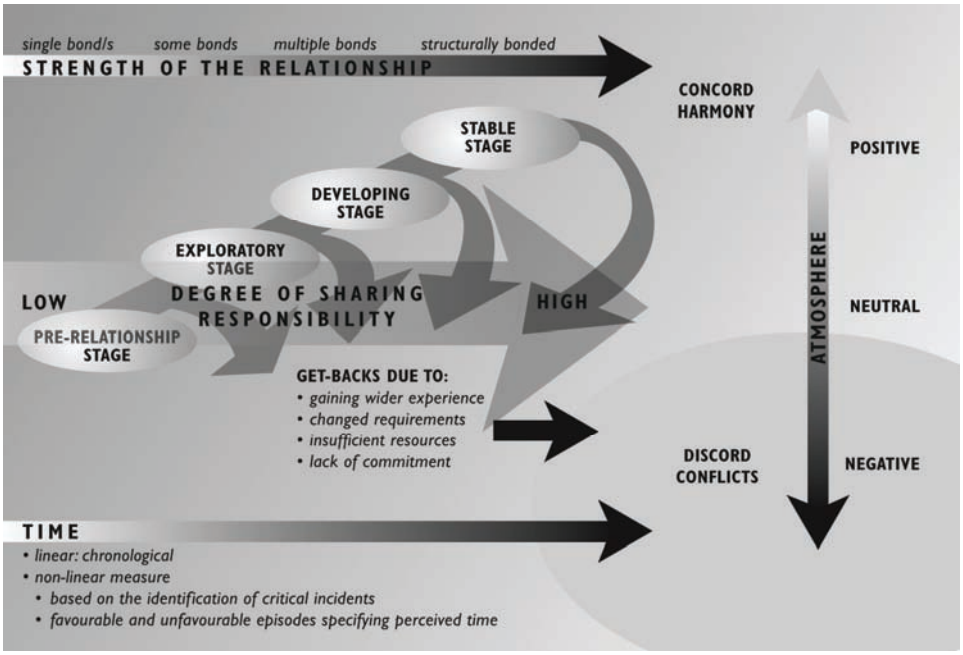

Figure 3: Development and Strands of Co-makership and Responsibility in Structurally Bonded Net(work)s

As noted, the depth of the relationship, its character, and impact on responsibility cannot be understood without considering the negative dimensions and influences of the relationship as well. In tightly bonded networks, the actors are often obliged to cooperate – at least on some minor matters – though it is often very difficult to accept all the behaviour in a straightforward way.

It can be postulated that in structurally bonded networks in which the actors are interdependent (one actor's decisions influence substantially the other ones), the probability of clashes increases with time. Numerous scholars seem to stress the prevalence of positive win-win- situations in stronger relationships (ignoring the importance of conflicts or underestimating their frequency). However, Castells (1996, 472) is quite sceptical when discussing this idea as he claims that *'the losers pay for the winners'*. This implies that a zero-sum game (dominant player as an overwhelming or sole winner) results under many circumstances in a networked society. Undoubtedly, this can cause hostile responses, mistrust, and corresponding behaviour among the actors. Undoubtedly, these responses (made by the reactors) have an impact on how the actors perceive the collective responsibility as well.

The actors are obliged to deal with the dialectical processes *on various organizational levels:* the dynamics in one particular net(work) stem not only from the general, inter-organisational tensions among the members of the network, but al-

so appears on dyadic (e.g. focal firm *vis-à-vis* counterpart), triadic (hostile and/or friendly intervention/s from a third party's - like LSPs - side) or net (referring to a limited set of actors and relationships, respectively, of an entire network) levels. This is evident as the inter-organisational issues are often as much inter*personal* (communication takes place in social nets rather than in the entire network) than purely inter-organisational. For Arbnor and Bjerke (1997, 59), describing dialectic relations under the actors' approach refers to the logic of ambiguity: relations change qualitatively in a continuous transformation. It is, thus, a necessity to make the transcendental interaction more visible. However, here ambiguity does not refer to some blurred indistinctness but rather to a dualistic interpretation.

Despite the recuperative processes prevalent in every relationship, basically all institutions and intentions (and actors generating and maintaining relationships) are inherently subject to deterioration. The attitudes towards inconvenient social relationships (also systems) can be explained with three basic strategies: loyalty, voice, and exit (as proposed by Hirschmann 1970). Acting loyally means that an actor is complying silently or cooperating without complaining (and probably the relationship hides the deep confrontations). Voice can be defined as an expression of anger with an intention to solve an actual problem (uncovering strongly extreme experiences and their impact). In very difficult dysfunctional systems, exit is often the only solution for an actor, though e.g. in deeply and structurally bonded nets with diverse tying elements, exit is neither possible nor desirable (compare to the strength of the relationship and its strong adherence in Fig. 3, making the total leave impracticable for a single actor). Diverse bonds in focal nets keep the actors closely and firmly together.

In figure 4, three different approaches are presented in order to distinguish the scope of different views in analysing inter-organisational relationships (compare to Fig. 2 in which A and B are typically managerial approaches employing the SR-scheme, C as an interactive representation refers to the network-based approach and D is the dialectical approach).

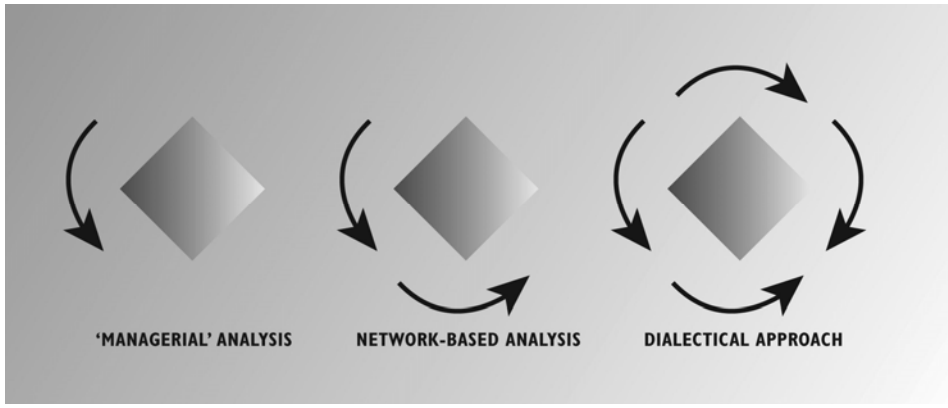

Figure 4: Extending the Analytical Scope by Dialectical Means

The managerial approach/analysis refers here to studies which aim at creating strategic models for higher performance and management of resources among business actors. The studies are characterised by a mechanistic Stimulus Response (SR)- scheme attached by an urge to trace practical strategic benefits (oversimplification and appropriate rhetoric are thus required). The network-based approach provides the analysis with new mindsets (existence of simultaneous collaboration and competition). It is proposed that the dialectical approach (despite its dualistic nature and polarising concepts) can extend the analytical scope by introducing new conceptual vocabulary and by grasping displeasing issues, which are often neglected in arelationship. The 'other side' can contain negations (such like non-responsible behaviour), which should be carefully considered in network analysis. Some of the extreme responses, however, can take place on inter*personal* level.

One of the probable paths for increasing the intensity of studies could be in the idea of deconstruction, which means that occasionally language *per se* (and its awkward nature) is not an appropriate medium to reveal the truth directly. Generally speaking, there seems to be tendency for scholars to create binary conceptual systems (in contrast to managerial approaches uncovering and exploiting an idea of simple distinction between one basic concept and its naïve contradiction), in which one term is constituted as the privileged norm later creating hierarchies of meaning (Jary and Jary 1999). This might lead to socially institutionalised rhetoric (which is even an urge for managerially-oriented practitioners). Deconstruction as a method aims at revealing the ambivalence and incongruousness of texts, which can only be understood in relation to other ones; as Cova (1994, 280) puts it (when claiming that reality is actually a pure illusion): *'everything is intertextual, not causal, or predictive'.*

A researcher, however, should be committed to uncovering critically the simplicity and inappropriateness of managerial rhetoric, and the logical analysis that hides as much as its reveals. Hence the latent (that is: not expressed linguistically with words, and phrases as there might not be any appropriate concepts for communication) is the challenge for analytical endeavours, not the visible and well-established.

3.3.2. Collisions, Conflicts and Co-Makership

It is assumed that a robust relation/ship requires sophisticated methods to embrace and reduce the threat of failures as well. The policies for increasing interest to consider the non-value added activities of the firm in more depth, may also lead to collisions in the network. The conflicts can stem from various policies targeted at encountering the questions of the macrospace responsibility (e.g. workers rights, democracy, poverty, ethical principles). In this sense, the mechanisms for handling the difficulties and the procedure for conflict resolution are of major importance for the on-going collaboration in every net(work) structure. One of the major expectations for the conformity of the behaviour is the anticipated means of working together under problematic circumstances.

Conflict can be seen as a collision, or as Crane and Matten (2007, 366) claim: *a conflict (of interest) occurs when … an organisation's obligation to act in the interest of another is interfered with by a competing interest.*' This may obstruct the fulfilment of that obligation.

Earlier study (see Nikkanen 2003) revealed that in a tightly structured network - as in domestic IFT net(work)s - the participants try to avoid open conflict in their own net by searching for a resolution which often takes place intuitively and subconsciously, but also rationally and intentionally stemming from the terms and conditions as stipulated contractually. This is also an obligation, since expressions of strong arrogance can increase tension, and could lead to an open conflict. Besides, the position occupied by a single actor coerces it to behave in some particular manner even when handling cumbersome matters. Hence, some of the most striking conflicts are resolved before any other harmful effects to the state of the relationship occur. The tendency towards consensus seems to be quite widespread. Certainly, this influences how the actors cope with responsibility.

As related to ubiquity of conflicts, some degree is virtually inevitable in every network relationship. Reasons for conflicts are diverse. As related to responsibility policies, the actors in a network may have different views and aims when handling these issues. Scattered objectives in terms of triple bottom line strategies can cause disagreement, which can subsequently lead to some form of conflict. Logistics service providers may have different opinions of the major tasks of the companies for considering socieatal issues: e.g. poverty alleviation is probably major objective for some companies, even theoretically.

As mentioned, the actors have different goals and aims in many practices and policies which - together with strong rivalry - can lead to conflictual issues. Conflict may concern the immediate goals of the network actors: there can be a situation e.g. in which the actors are not unanimous about the importance and role of the responsibility. Hence, prioritisation of the policies can cause awkward situations.

Conflict can also be important as it can be a trigger for changes; a partner can redefine a position of another member due to a conflict. Hence, conflict is not necessarily a bad thing as constructive conflicts are prevalent continuously in every relationship. On the other hand destructive conflicts can lead to dissolution of a relationship (compare to Fig.3). Generally, conflict can have positive or negative consequences for a relationship. As such, a conflict can be a trigger, even an imperative, for later co-makership. Moreover, this type of mutual collaboration contributes to the trust-making procedure and coexistence by gradually increased joint-efforts. Previous studies (see e.g. Nikkanen 2003) confirmed that in a structurally bonded net(work) *trust requires continuous acts,* (followed by episodes) and but also adequate *reactions.* On network level the trust (including elements of trust and embodiments of trustworthy behaviour) is one of the major ingredients in discussing the dimensions of responsibility: to be responsible means that the actor is expected to act in a trustworthy manner.

Regarding disharmony and even opportunistic behaviour, it can be claimed, that there is no relationship without problems. Occasionally, however, the participants can protect their rights to a certain activity by overreacting to proposals made by a partner. An initiative to do more e.g. in the field of philanthropy may be perceived with perplexity and embarrassment by the other actors. However, defensive actions are needed only if oppressive and adversarial acts are anticipated. This pattern of behaviour is not required if one partner is convinced that their counterpart is committed to open discussions and sharing of experiences. Furthermore, a high tolerance of criticism indicates that a party is conducting its activities with determination; certainly modest adjustments are again needed. In all, in IFT networks there seems to be quite a low degree of formalism in the resolution process instead of always strictly interpreting e.g. the legal bonds (and associated contractual obligations and responsibility; see Nikkanen 2003).

The discussion above advocates the strength of informal collaboration within social nets. This is a necessity because of the mutual urge for consistency. As noted, in this kind of behaviour - and an outcome of the process - the net members are looking for harmony. Argyris (1999) claims that in interpersonal relations, the imbalance, or incongruence is often abhorrent. Using the ideas of cognitive balance theories, he postulates that *'cognitive balance or consistency enable the individuals to predict accurately and thus behave more effectively in their interactions with others (...) Also, 'it is assumed that there is a basic tendency for individuals to strive to reduce imbalanced states as cognitive dissonance and inconsistency.'* (ibid., 386). These viewpoints can offer some additional ideas to cope with inter-organisational issues as well. Moreover, attempts to drastically change current roles – in order to attain a new position – could be harmful. Re-orientation in changing roles, as well as new positions substantially decreases some participants' opportunities in their attempts to give new kinds of solutions to the others. It must be argued, however, that under some circumstances it is quite difficult to find an adequate answer to the question of how to balance and solve the contradictions caused by the different policies - as Scott (2007, 38) argues *'the process...*(of decision making).. *is an example of moving social contradictions from one space to another, rather than resolving them*'

Co-makership is often based on mutual confidence, which is established in a long-term interaction. Often the result, a relationship, is structurally bonded. For this reason there may be joint-efforts to foster the development of responsibility-related policies - not just in the dyadic relationship but beyond it as well. The conflicts, once they occur (and have later been solved) can even be sources or triggers for closer collaboration - also in environmental and societal policies.

4. FROM MANAGERIAL TO NEWER ORIENTATIONS

4.1. A Prelude: The Basic Approaches

With regard to the research into IFT under conventional and managerial views, the following depiction (Fig. 5) can be proposed to view the contribution of different perspectives for contemporary analysis (see also Arbnor and Bjerke 1997, Nikkanen 2007. The illustration is introduced to clarify the theoretical and practical differences in distinctive analytical orientations.

In all, during the last decades the prevalence of actor- based methods has increased to complement the analytical methods and their tools.

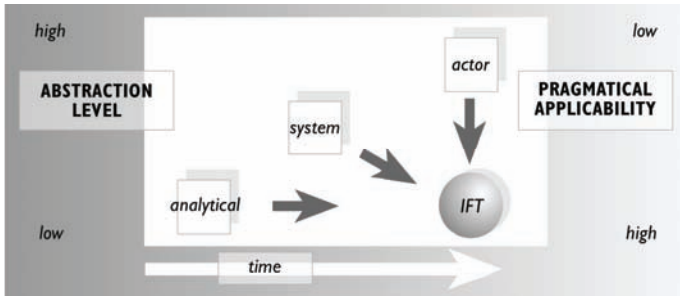

Figure 5: Complementary Approaches in Analysing Contemporary IFT Networks

More specifically, Fig. 6 uncovers the details of these basic proposals.

In *analytical* orientation, the researcher seeks the causal relations between the cause and effect with the help of deterministic or stochastic models. It is assumed that reality is objective and knowledge does not depend on the observer. The *systems* approach, correspondingly, views reality in a different manner: reality is truly and objectively accessible. The conventional (Demand) Supply Chain Management (DSCM) model as a managerial and theoretical framework reflects both the analytical and system-based orientations. In related studies the elements of infra-

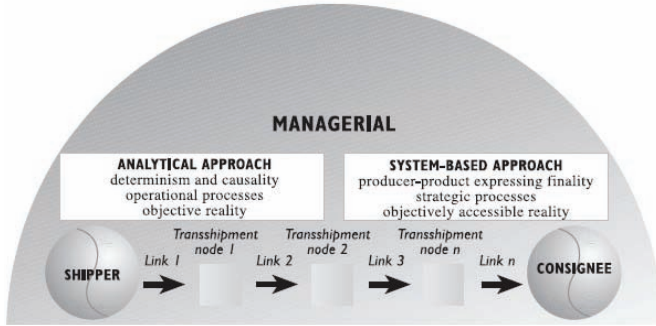

Figure 6: Analytical and System-based Approaches

structural networks (with nodes, hubs, transhipment points and links) are the major topics of interest. In addition, e.g. interoperability as a technical challenge is addressed. The managerial approach is explicitly utilised by operators in transport operations facilitating and contributing to the efficiency of the entire performance. In theoretical analysis, the examination relies more on classical modelling. Hence, the hypothetic-deductive logic and mechanistic Stimulus Response (SR) scheme with action and reaction type of responses by actors are under consideration (compare to Fig. 2). In this view, the transport networks are reflections of infrastructural networks, which constitute points of origin or destinations and links between the nodes/hubs; the nodes (e.g. trans-shipment points) are characterised by some functional activities like warehousing, loading, or discharging of ITUs. The links are thus the connecting elements in the infrastructural networks: besides seaway routes, railway tracks, and roads, examples of them include communication and information linkages.

As noted (see Fig. 5), the tendency of using more actor-based articulation has also increased its use in IFT. Figure 7 sheds light on this proposal, particularly as related to analytical and system-based approaches.

The *actor* view means that the whole exists only as meaning structures, which are socially constructed (Arbnor and Bjerke 1997). This worldview is linked with the idea of interaction; the results are diverse nets and inter-organisational networks,

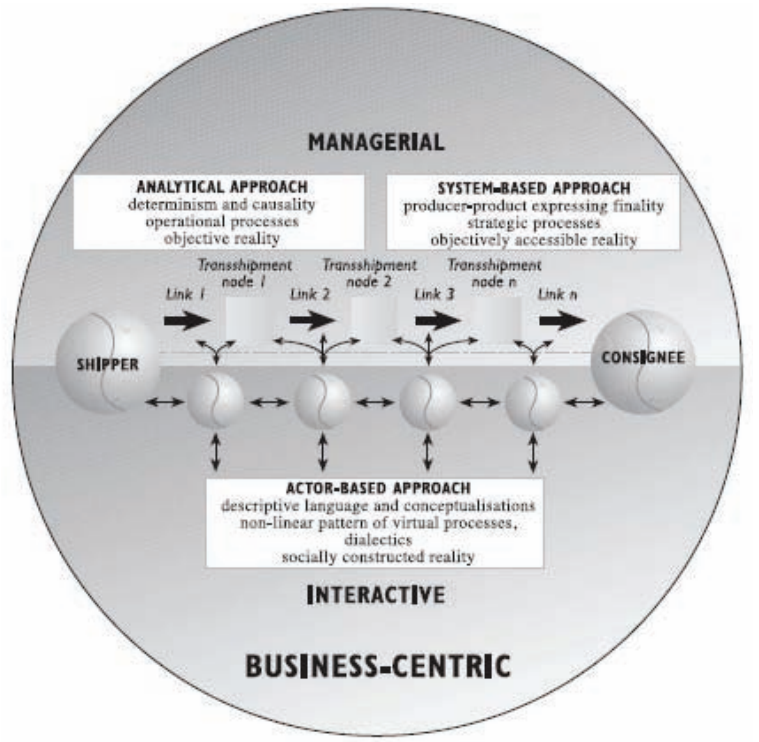

Figure 7: Application of Three Basic Business-centric Orientations in Examining IFT

which can be described as sets of (business) relationships. Relationships are created through interaction. Because reality can be viewed as a social construction, every actor (e.g. a firm or the people representing it) has a limited ability to comprehend fully the conformities of the real world. The networks constitute a set of diverse interconnections among and between actors. The actors are often firms or other organizations but they can also be individuals or groups of firms working together. There are various interpretations of the inter-connections that link the multiple network members. In order to understand the true nature of relationships, the interaction *per se* (regarding e.g. its frequency and depth, levels, context) should be scrutinised. If a network is defined through relationships, social structures (which consists of social relationships between the partners) and the interaction that crosses the traditional boundaries between various organisations, should be examined carefully.

The actor view has certain implications. Considering IFT, this means that a chosen network can be considered as a set of cross-organisational relationships between operators (e.g. carriers, integrators, LSPs). Therefore, sufficient attention should be paid to the various dimensions of these relationships - not only on a dyadic - but also on a net(work) level. Moreover, the actor networks (instead of infrastructural networks) can - and should be studied. This implies that non-legal responsibilities and obligations (those exceeding what e.g. agreements or the law stipulates) are kept in focus.

To wrap up these three different approaches, it can now be suggested that pragmatic IFT research work can be enriched by the propositions of the actor view, by paying proper attention to the roles and positions of operators and other participants engaged in some particular networks. It is also hypothesised that the dominance of conventional explanations in transport-related studies, (including its theoretical underpinnings and assumptions and their influence on the research) means that not enough attention has been paid to the actors (such as operators, carriers or integrators) and their specific roles and position in the IFT networks. Hence, the other issues – including responsibility- cannot be discussed properly.

There is, however, a problem which stems from practice. As already mentioned in subchapter 3.2., defining an IFT network accurately is actually an attempt with limited success as it is very difficult to depict the total scope of a network (from a shipper to the final consignee). It is not possible to delimit a network appropriately, as every boundary is artificial. In order to describe network structures concisely, a limited and specified set of actors should be examined. This means that in empirical analysis, a constellation of appropriate relationships (defined through the focal net) should be scrutinised, as most of the operators have only limited knowledge of the scope of their outer reality.
Finally, if IFT is regarded as intermodalism, it can be interpreted as a network phenomenon tied up with various relationships, inherent network behaviour, and respect policies. Furthermore, intermodalism is here defined not just as a phenomenon caused by the production system, but from a particular analytical an-

gle as well: intermodalism is considered to be inter-organisational behaviour represented by inherent (social) processes and structures. The processes include both activities for better economic performance and value-added activities but also voluntary policies for supporting the aspirations of stakeholders and other interest groups. It has already been claimed that reality is a social construction, which means that every actor (whether a firm, a group of people, or a single human actor) has not enough competence nor skills to understand reality rationally, especially when the entire features of the things (relationships, policies) are under consideration. Nevertheless, the contribution of social network theories (represented e.g. by dialectical explanations and actor-based models) can provide some new mindsets for the better understanding of responsible behaviour.

4. 2. Extending the Analytical Scope - a Proposal

Besides the basic three approaches, there is a definite need to grasp more carefully the true area of networks especially if considering the environmental concerns. Therefore, some new proposals are required to augment the previous models. These suggestions are presented and discussed shortly in this subchapter.

Three major approaches, which were presented in subchapter 4.1. for examining IFT (and related policies), can be categorised as business-centric approaches. These address mainly the strategic decisions and activities of business actors in creating and providing value-added functions. The assumption of a profit-seek-

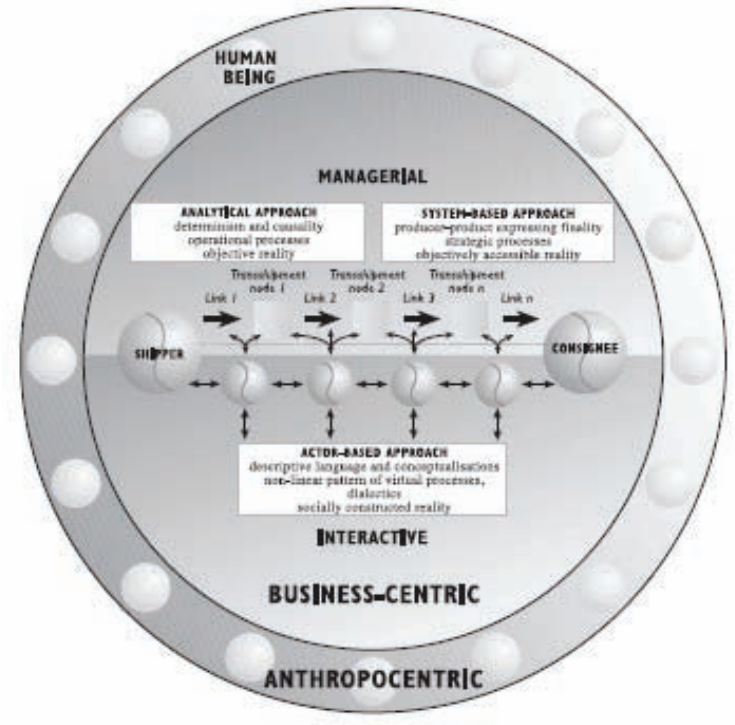

Figure 8: Anthropocentric View *vis-à-vis* Business Views

ing or profit-maximising firm is presumed. In all, these models are still dominating studies in transport. It is assumed that on well-functioning markets, an optimal balance between firms' interests and the state of ecosystems can be achieved (e.g. due to increased interest in embracing corporate responsibility).

Under an anthropocentric approach (Fig. 8), it is assumed that the individual (and a local community representing diverse human nets) should be considered at the centre of policies and related studies. Therefore, the inherent research work emphasises e.g. the need to secure a good life for all the people irrespective of their role/position in society. Consequently, it is also proposed that there is a strong relationship between economic growth and the happiness/welfare of individual: the higher the standard of welfare, the better options there are to secure people's well-being.

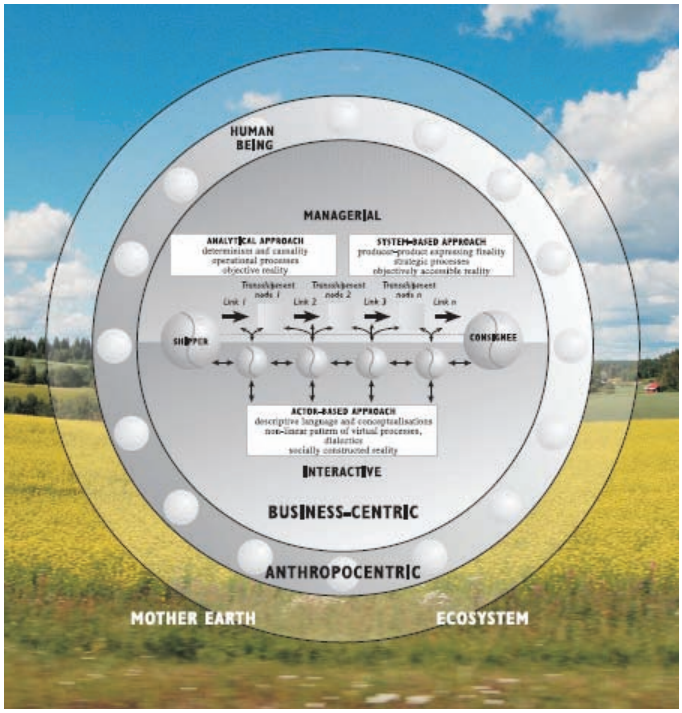

Figure 9: Approaching the Issues of Sustainability and Responsibility

The ecocentric (or biocentric) approach (see Fig. 9), in turn, is based on the idea that the entire existence of beings is dependent on the state of natural environment. In an extreme case, it can be even claimed that the state of the entire ecosystem should be at the centre of interest, not the needs of individuals. The natural world should be in the core of the analysis, not the needs and wants of the human race.

Eco-efficiency can be seen as an answer to the challenge to consider more carefully the needs of the environment. It can be described as a manifestation, which assumes that more goods and services can be produced with fewer resources and with less waste and pollution. In short, more can be produced with less. In general, the proposal aims at minimizing ecological damages. Finally, in Figure 9, the 'centric' views are integrated and visualised.

To wrap up the presented approaches, there seems to be a growing quest for creating analytical methods for more sustainable policies, which provide guidelines for the actors on the mitigation or even elimination of harmful and negative effects. This requires that conventional 'managerial' approach/es should be complemented by newer suggestions. Unlike the claims of some practitioners, this can cause analytical and strategic tension. Besides theoretical discussion, more accurate information e.g. on operational calculation methods and state-of-the-art solutions are also needed to estimate all the costs (including external) of running transportation operations.

As regards corporate responsibility in the transport industry, more interest and hope has been paid to intermodal freight transport. One of the reasons for this growing interest are the environmental issues: e.g. reduction of emissions can be achieved through a better balance between transportation modes. Congestion relief (and again the total cost decrease caused by his effect; the external costs) and safety (shifting traffic from modes with high accident rates to those with lower rates) are some of the reasons to prioritise IFT. The attitudes and opinions of local people should also be embedded in related studies. IFT, however, is not an unambiguous concept: there are several options (e.g. containers vs. articulated vehicles) and distinct markets (intercontinental, intracontinental) for intermodal freight making unequivocal research work difficult.

Finally, by introducing these models, a critical question, which is even a thread of this study, is also uncovered: for whom the potential benefits and good is created: for the business, for the people, or for the environment. Hence the fundamental question - *cui bono* - needs to be explained carefully.

5. CONSIDERING RESPONSIBILITY AND SUSTAINABILITY

'.....more welfare from less nature'. (European Environment Agency)

After a discussion of various basic models providing a basis for subsequent analysis, the following model (Fig. 10) is presented to describe the potential research areas and themes of the study.

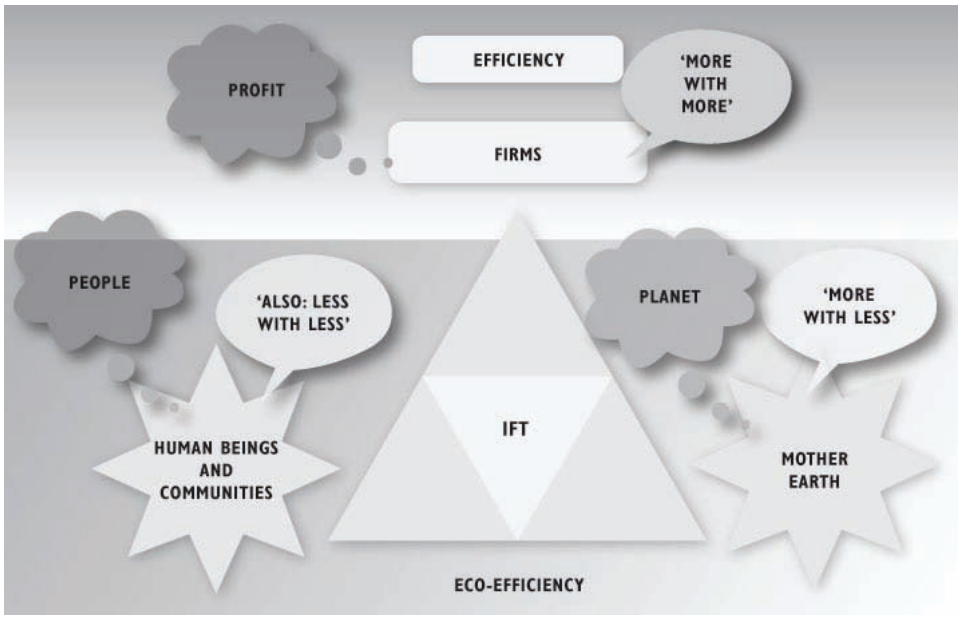

Figure 10. General Framework of the Study with a Research Focus

The visual presentation is close to initial explanation introduced by Elkington (1998), which simultaneously considers (and aims at balancing) economic, environmental and social goals. This triple bottom line (TBL) model suggests that at the intersection of social, environmental and economic performance (the triangle area in Fig. 10), there are activities that organisations can engage in which *'not only positively affect the natural environment and society, but which also result in long-term economic benefits and competitive advantage for the firm*' (Carter and Rogers 2008, 365).

The potential research areas in each of these three dimensions can be listed as follows (adjusted and added from the tasks as compiled by Christopher 2008, 242):

- profit & efficiency: economic targets, policies and strategies for growth, competitiveness and expansion; economic value-added; return on investment and other measurement tools including key performance indicators (KPIs); tools and models that indirectly influence the efficiency like quality measures and measurement tools

  ⇒ *business processes* (cause internal costs)

- planet & environment: climate change and emissions, land use, waste of material, biodiversity, energy use, water, chemical and toxins, air pollution, ozone depletion, ocean and fish stock, eutrophication, acidification, degradation of pristine nature ; (in a broader scope including the built environment; see subchapter 5.1.4)

  ⇒ *environmental and ecological processes* (negative impacts cause external costs)

- people & society: human rights and education, labour standards, health, community impact, co-makership and options for diverse interventions by public and private actors, health, well-being and happiness, joint-decision making in community nets, preservation of cultural diversity; also socio-cultural, pervasive aspects in a broad scope to name impact of policies on practices, beliefs, attitudes, and traditions, ways of thinking and values, (what is perceived important and relevant), changes in everyday life

  ⇒ *socio-cultural processes* (negative impacts cause external costs)

It must be remembered that the economic dimension can contain elements which do not directly increase the profit level of the company, including attitudes towards tax and corruption, poverty alleviation, employment and wages, and corporate ethic. Moreover, business processes are, without a doubt, man-made and therefore reflections of the socio-cultural processes.

As regards the non-business processes, the two other sides of the triple bottom line model can be further-categorised as follows:

	biotic	abiotic
Environmental processes	organisms and ecosystems	physical and chemical conditions
Socio-cultural processes	human beings, communities, and societies	built environment (e.g. infrastructure)

Table 2: Classifying the Strands of Eco-Efficiency

The depiction (Fig. 10) gives preliminary suggestions for the themes that can be studied if traditional analysis (emphasising firms' strategic decisions and the rewards gained) and issues of eco-efficiency (also societal ones) are to be consolidated. This framework can also be a potential source of theoretical and scientific tensions and disputes. The worldview/s arising from the presentation added to the research themes, include various propositions and methods (and values) which can contradictory by nature. Hence, the more a researcher extends the scope of analysis, the more likely it is that they will be embraced by the conceptual and methodological divergence caused by distant and discordant dimensions of the study. Despite the claims of some players including scientists, it is possible that the trade-offs can be examined but not adequately solved. Undoubtedly, the major concerns stem from one particular - overwhelming - dilemma: how to decouple credibility of economic efficiency and growth (and policies related to it) and the well-being of a mankind and nature. The differences in the points of departures may lead to different interpretations already in the beginning of the study as following depiction (Fig. 11; compare to Fig.4) presents

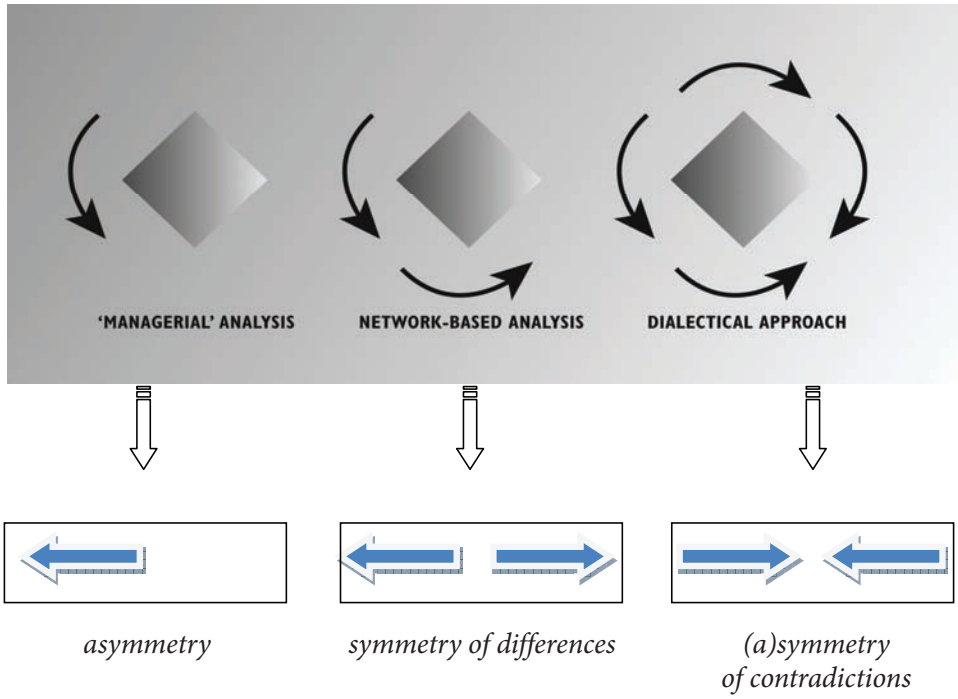

Figure 11. Symmetry and Asymmetry in Different Approaches

- *asymmetry:*
  - dominance of one thing (to name model, explanation, intention, practice, category, conceptualization as examples) at the time over the others
  - as regards the triple bottom line model: financial and economical targets mainly (only) in focus
  - implicit rejection of attributes of eco-efficiency

- symmetry of differences:
  - on conceptual level: two facets of one character (e.g. role-position concept)
  - with triple bottom line model: attempts to integrate the various aspects of the proposal for creating one unity (business and non- business targets)

- (a)symmetry of contradictions:
  - the revelation of opposites in gaining a more comprehensive picture of the reality and inherent intentions
  - negations as vital and explicit expressions that need to understood in examining the things
  - the things and' no- things' can be distinguished though it is assumed there is an integration and unity of opposites: despite the apparent distance (and dualism), the things and no things cannot be treated separately or isolated. This is needed to apprehend more concisely the issues under consideration (and the practices behind them)
  - in triple model worldview: besides financial and non-financial issues, also 'no-non-financial' (negations) may be considered
  - unlike the TBL- model suggests, the intersection area in the model is unattainable as it is logically incompatible and practically absurd
  - we cannot claim that there is either a symmetry or asymmetry but rather a continuous interplay (dynamical tension) between the things under scrutiny
  - reflective and speculative analytical tools are required to gain really new knowledge

The refinement of the TBL- model requires certain logical steps to continue. Carter and Rogers (2008, 377) propose some initiatives to name the development of scales to measure the triple bottom line and its supporting facets. Moreover, more research is required to better understand the relationships among resource dependency, external uncertainty, vertical co-ordination, imitability, and SC resiliency.

Without doubt, it is worth questioning to what degree the conventional explanation provides guidance for future attempts in scrutinising e.g. reality/ies in the context of SC/network. Leading theories and models applied by the majority of researchers in the field of business studies influence how inter-organisational issues – such as IFT- are commonly analysed. As Kuhn once suggested, the dominant paradigms (e.g. of contemporary business research methods) do affect on the decisions made by researchers - including e.g. selection of the methods. The Kuhnian manifestation claims that scientific community decides the boundary between orthodoxy and heresy. The components of scientific orthodox approach include symbolic generalisations (typical expression used - even jargon) and typical models *inter alia.* Ideal examples - including the use of selected metaphors - are typical.

Besides network-related studies, metaphors are used widely though often though not consciously. In lexical semantics it refers to the result of the substitution of one lexeme by another in some given context. Undoubtedly, this should be conducted

on the basis of (semantic) equivalence. Hence, one of the prerequisites is that there should be enough similar and acceptable terms and their meanings to be transferred from one context to another (see Greimas and Courteś 1979 for more discussion).

The widely-accepted framework of triple bottom line (also employed intensively by scholars) can mislead the researchers in their attempts to gain truly new knowledge if the concepts are not properly selected. Hence the relevance of dialectical explanations and sociological models (challenging the 'musts' of modern SC/ transport analysis and stretching the focus areas) is worth testing.

5.1. Dimensions of Responsibility and Sustainability

' Sustainability is equity and harmony extended into future,
a careful journey without an endpoint,
a continuous striving for the harmonious co-evolution of
environmental, economic and socio-cultural goals ' (Mega and Pedersen 1998).

In short, responsibility can be understood as an assumption of accountability by the actors themselves (and the others as well) that they are doing something beneficial (e.g. a task or an action, a policy) and/or behave in a certain trustworthy way. In short, what we (as actors) do is right as it makes good. This action is (probably) not selfish, but targeted to increase the welfare and the good of others (whether a man or nature) rather than the good of ourselves. Hence, a single actor has the opportunity and ability to be accountable and to act (rather) independently and take decisions without external authorization. Undoubtedly, all the acts stem from the roles and positions the actors may have.

Accordingly, an actor is also obliged to accept the consequences as well as the controlrelated issues - there are the expectations (due to the position) by the network actors. Hence, responsibility is closely related to trustworthiness: conformity of actions creates gradually mutual trust between the partners in some particular net(work). In tightly bonded nets there cannot be trust without some degree of uniformity in actions and policies and without responsibility. Hence, responsibility and trust are strongly interrelated.

Many practitioners do not make a clear distinction between the terms responsibility and sustainability, but use these interchangeable - e.g. most widely-adopted (and probably often quoted in discussing responsibility too) term for sustainability employed is that of the Brundtland Commission: *'development that meets the needs of the present without compromising the ability of future generations to meet their needs'* (World Commission on Environment and Development 1987, 8). Occasionally, among practitioners, there seems to be a tendency to define the concept of sustainability in terms of addressing mainly environmental issues in a manner similar to the use of responsibility to refer to societal concerns.

The philosophical discussion on responsibility has historical roots. Aristotle in his work - Nicomachean Ethics - analyses the conditions that exculpate us from blame and the circumstances in which blame is appropriate. Accordingly, among conditions that excuse an actor, there is intoxication (!), force of circumstances and coercion. He strongly emphasizes the essence of control. This also means that if something lies beyond our control, it also lies beyond our responsibility. This is implies that controllability is required for responsible measures of the actors. He also emphasises our capacities for deliberation and choice which are important to a responsible actor (agency). Aristotle's excusing conditions are somewhat difficult to handle as they can provide a basis for quite liberal non-conformities in network behaviour.

Often, the moral philosophy advocates two primary dimensions. Responsibility can be seen as kind of an obligation to do something (requested by e.g. an authority). The role of an actor is also addressed: it recognises the fact that in order to achieve the purposes (your own), one must act oneself - rather than expecting others to do something (assumption of action that is responsible). This dualistic interpretation is close to the role/position-divergence/convergence.

Current research work is questioning the assumption of whether there is (or can be) a single and unified concept for determining responsibility. Therefore, researchers prefer to give alternative versions of this term. Indeed, one of the most challenging areas in discussing responsibility adequately is that the phenomenon has an abundance of different potential attributes. Actors try to discern meaning in events and they interpret transactions and situations both cognitively and emotionally. In doing so, they use automatic and controlled processing. It must be admitted that both the cognitive interpretations and emotions lead to action - e.g. for assessing what is actually meant by responsibility, what to do under some circumstances and what the anticipated results are. Undoubtedly, the emotions of the human actors (of the organisational actors) are a very challenging area for research work.

Some scholars distinguish between attributions concerning the cause of a given event and those concerning responsibility for it (as summarised by Hinde 1997). In his view, responsibility implies intent, and the ascription of responsibility will depend on the judgments that the actors could have foreseen that a given action might lead to conflict or harm. The actor would also know the other possible courses of action and have the ability to carry them out.

Responsibility defined in this way expresses moral responsibility. Indeed, questions of moral responsibility are often associated with concerns of doing right (or wrong). In contrast to this narrow approach (paying attention to negative results due to wrong-doing) a more positive approach can be revealed. A positive (collective) behaviour based on certain moral decisions can lead to positive responses.

Based on the argumentation of some scholars, collective responsibility seems to be strongly influenced by the (sub)structures of the net(work)s and the relationships

prevalent in them. The collective nature defends the idea that the coherence of collective actions and intentions is also critical in policies. Undoubtedly, the joint-efforts for collective actions are not similar, but depend on the structures and relationships prevalent in networks. However, the diverse actor groups creating structures - like nets - can share same beliefs, attitudes and intentions for actions. Probably, all the nets are not capable of the same kind of behaviour, clearly expressing their common will. Without doubt, the question of responsibility as a phenomenon has a strong collective character. Collective responsibility means that the actors are collegially ready to face the open issues and questions of responsibility. This gradually increases a common understanding and agreement on what is correct and what is not.

It is also assumed that collective responsibility is influenced by embeddedness. Embeddedness refers to the social context or structure in which actors are enmeshed - e.g. in some particular net. Some scholars tend to propose hierarchical, multi-layer depictions. Generally speaking different attributes can be suggested to illuminate the diversity of this term - temporal, technological, spatial, social, political, and market elements can all be used to describe this entity. To exemplify the power of different attributes, Gulati (1998, 295) has defined the elements of social embeddedness by classifying structural, cognitive, institutional and cultural elements. Presumably, one of the core concepts of this study - position - is predominantly influenced by how a single actor is embedded in a network of multiple relationships. Therefore this (co-)concept can be a reflection of the structural aspects of network which is highly influenced by social elements and the relationships created to maintain these. The social structures (inter*personal* relationships) strongly influence - not just the positions - but also the roles the actors may have and their attempts to demonstrate more responsible behaviour and respect policies.

Embeddedness can be an expression of involvement. Indeed, economic geographers tend to define this term in such a way, that it refers to involvement in local relations (Oinas 1998, 52) though this is not a uniform and settled view as some researchers include non-local aspects in the term. The linking tie between social relationships and the geographical explanation is the fact that most of the contacts - specially the informal ones - are with those actors who are close to the focal actor. In other words, most of the interaction is between those participants, who have a close organisational proximity (as well as social structures). In this sense, the idea of the embedded actors in some specified context is not distant from how the focal nets are characterisised. As already pointed out, the social structures affect how the actors perceive the sphere of their being, and the tasks and imperatives that need to be accomplished. Responsibility is one of those potential tasks.

Nets as groups (or clusters) can have some form of joint decision-making procedures in place and/or time. The outcome of this process is often assumed to be necessary for collective responsibility. The first is a set of actions that have an identifiable moral agent - e.g. governing board or as in IFT some integrative measures managed by one/some actors. The second is a set of decisions that are made

self-consciously on a rational basis. Under limited rationality (constrained e.g. by the scarcity of resources or knowledge), the measures are made purposively.

5.1.1. On Corporate Social Responsibility

Corporate Social Responsibility (CSR) is subject to intense debate. According to World Business Council for Sustainable Development CSR *'is the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large'* The pillars - as they define three major dimensions - are economic growth, ecological balance and social progress.

Firms pursue CSR quite differently for various reasons: unclear definition of the term CSR (and respect strategies), the great volatilities in general interest for the issue and the many different approaches chosen by other companies are some of the reasons for diversified opinions. Generally speaking, CSR refers to companies *voluntary* actions and they are thus not required (at least theoretically) by the authorities, by the law, or by profits. Undoubtedly, CSR is a form of self-regulation. Another point is that firms want to make clear distinction between responsible operations and charity. Donations and altruistic financial aid do not make companies more responsible though they can be of great importance to those who receive them.

CSR encompasses not only these three dimensions but can include also ethical, legal and other discretionary responsibilities. One potential ingredient, ethics, in turn, is more related to moral judgments and behaviour (of actors or groups of them). Indeed, the *moral* arguments for companies to consider more carefully CSR (Crane and Matten 2007, 48) can be listed as follows:

- corporations cause social problems (including pollution). They have, therefore, a responsibility to solve these.
- as powerful social actors, with recourse to substantial resources, companies should use their power and resources responsibly in society.
- all corporate activities have social impacts (of one sort or another). Hence, corporate activities cannot escape responsibility for those (whether they are positive or negative).
- corporations rely on the contribution of a much wider set of constituencies – rather than just shareholders. They have a duty to take into account their interests and goals as well as those of shareholders and communities.

From strategic point of view, several themes are discussed in management literature including (Bhattacharyya 2010, 83):

- a firm's internal and external stakeholder management perspectives,
- a firm's activities perspective,

- the strategic traits of strategic CSR and
- the business gains offered by strategic CSR.

Firms undertake certain actions to achieve production and services. Hence, these activities are central to any firm. Without these, the discussion of the benefits of CSR for a firm/community is effectively meaningless. Altruistic behaviour, in contrast, challenges the utilitarian aspects of CSR.

As already pointed out, the decisions for more responsible behaviour are countered by ethnical questions (and dilemmas). To simplify this, every strategic decision is also an ethical decision. Crane and Matten (2007, 129 -130) have identified number of different factors that indicate the importance of the ethical decisions:

- the decision is likely to have significant effects on others. This implies that even egoism is concerned with others.
- the decision is likely to be characterized by choice, in that alternative courses of actions are open. Hence, a moral decision requires that the actors truly have a choice – and free will.
- the decision is perceived as ethically relevant by one or more parties.

Without question, the discussion on ethical decisions cannot be separated from the worldviews and general theories. Ethical theories, which are the rules and principles that determine right and wrong (for a given situation; Crane and Matten 2007, 86) influence how these decisions can be seen and understood.

Bhattacharyya (2010, 84) generally and Rogers and Carter more specifically (Carter and Rogers 2008, 370-371) have listed various *practical* aspects of CSR. These activities could help e.g. a firm to:

- generate raw material,
- streamline the production and operational activities in terms of cost and environmental parameters (cost savings e.g. due to reduced packaging waste and the ability to design for reuse and disassembly),
- streamline logistical activities in terms of cost and environmental parameters, (e.g. reduced costs, shorter lead times and better product quality associated with the implementation of ISO 14000 standards, which provide a framework for environmental management issues)
- develop technology for new products and services with communities for increased economic, social and environmental inclusiveness,
- develop better human resources (e.g. reduced health and safety costs and lower recruitment and labour turnover costs resulting from safer warehousing and transportation and better working conditions)
- develop administrative systems and procedures which uphold socially responsible and environmentally friendly management practices (e.g. an option to proactively shape future regulation).

It is worth noticing that these activities reside inside a firm's boundary (and hence are intra-organisational) and add value. The practical implementation can be problematic as many projects for considering responsibility fail because the managers accomplish discrete issues: *'without clear, holistic, and more strategic understanding of how these pieces of the puzzle fit together to create their organisation's overall sustainability position'* (Carter and Easton 2011, 47) the management of responsibility is not working properly.

In current management literature there is lot of discussion of the benefits of CSR, though until recently the assessment of real impact has not been conducted explicitly. Much of the research work is characterised by general notes and rough estimates of the potential influences and rewards. In a general manner, Bhattacharyya (2010) has listed the current debate on this issue in recent literature with following key features. Based on the earlier research work, in his view CSR help the firms to

- follow a generic strategy,
- develop strategic resources,
- create new business opportunities, and
- manage stakeholder-related risks better.

In short, these enablers can help the firms to accelerate their practices for a new strategic alignment. As such, it's not a question of doing the things in the same way as earlier, but rather to re-define their policies in quite a radical, not evolutionary and incremental, way.

There are lot of indicators for a more positive attitude towards the dimensions of responsibility within the field of sustainable SCM. However, much of the inherent research work is characterised by quite narrow perspectives with no true integration of different aspects of responsibility and/or sustainability for on-going and well-functioning strategies.

Some studies, however, have delineated the tasks and options for SSCM. Carter and Rogers (2008; also Carter and Easton 2011) identify four supporting facilitators of sustainable supply chain management (SSCM):

- strategy (holistically and purposefully identifying individual SSCM initiatives which align with and support the organisation's overall sustainable strategy),
- risk management (including contingency planning for both the upstream and the downstream SC).
- organisational culture (deeply ingrained and encompasses organisational citizenship; also high ethical standards), and
- transparency (in terms of proactively engaging and communicating and having traceability and visibility).

The essence of CSR is communication. Interaction with stakeholders refers to various forms including discussions, negotiations and collaboration between different interest groups and representative organisations. These activities are closely associated with transparency. A responsible organisation will report its efforts publicly, and it also gives the public (e.g. a local community) an opportunity to evaluate their activities. Most contemporary organizations have created a Code of Conduct- policies (and respective documents) expressing and promoting their growing interest in ethical issues. In SCM, in addition to communication, transparency and dialogue can be improved through vertical co-ordination across SC as well as the horizontal co-ordination across networks (Carter and Rogers 2008, 367). As well as communication and documentation, other forms of activities (real acts) are required to express responsibility - signs, evidence, standards, and labels to name just a few. Though often stipulated by standards or laws, they can provide complementary elements for more responsible behaviour.

Generally speaking, firms as actors should explicitly recognise the three major elements of responsibility in their practices. Economical responsibility refers to efficiency and effectiveness, which are often predominantly in focus. Operationally this means maximisation of output by utilising resources in the most efficient manner. The growth of interest in environmental responsibility leads (or may lead) to the development of policies for increasing eco-efficiency in nets. Operationally, firms are showing more willingness to reduce the resource intensity and use more renewable resources. Some other activities are employed as well including more recycling and production methods which reduce harmful emissions in order to lower carbon footprint.

To this end, it is critical to determine a balance between the environmental impact of producing services in relation to their cost-effectiveness. In practice there are some tools for assessing the impacts e.g. Life Cycle Assessment (LCA) and cradle-to-grave analysis. Societal issues are often under-evaluated in studies on responsibility partly because the environmental issues and measures (e.g. reduction of carbon footprint) are so highly emphasised. There is a noticeable lack of analysis particularly in international transport though running the operations often requires huge investments in infrastructure (e.g. seaports, dryports, terminals, railways). These decisions have a strong influence on the welfare of the people and their communities.

The three responsibility dimensions also play a key role in analytical attempts to uncover the details of IFT. Sustainability and environmental concerns have generated a lot of interest in intermodal transportation as these can be strategic weapons e.g. in congestion relief, and reducing emissions and noise. On the other hand, increased responsibility stems from stakeholders' interest in supporting this, because the increased traffic can be a trigger for regional development. Hence, IFT-related activities strongly influence the decision-making of service providers (and others) and spatial structures.

Despite many attempts to develop an unbiased definition for practices, there is still a lot of confusion to be solved (Dahlsrud 2006). Presumably this problem is (at least partly) academic and is caused by diverse and newly introduced terms: e.g. some actors separate CSR from Corporate Environmental Responsibility (CER; Porter and Kramer (2011) introduced Creating Shared Value (CSV)- concept to challenge CSR). Moreover, it is worth remembering that the policies aiming to achieve more responsible behaviour among firms is not a new idea - as Dahlsrud (2006) puts *it '.... CSR is nothing new at a conceptual level; business has always had social, environmental and economic impacts, ...'* . Traditionally, firms have encountered many of the questions of responsibility (e.g. their own employees' and local communities' welfare) in a very positive way, supporting the development with voluntary aid. Expressions of philanthropy and financial aid have always been important for some leading-edge companies. Hence, the newly introduced term might mislead practitioners as it can refer to something, which is already recognised and accepted though not carefully conceptualised or discussed.

In order to increase understanding of this phenomenon, the concept can be split into certain categories. Hence, corporate social responsibility can have other subdimensions including CSR as philanthropy, CSR as risk management and finally CSR as a valued added activity. Aesthetic issues can also be suggested. In addition to these, Dahlsrud (2006) presents stakeholder and voluntariness dimensions.

In recent years, the number of CSR related studies has increased exponentially (see e.g. Dahlsrud 2006 for a summary of numerous studies). Therefore, in this study these basic dimensions are only briefly introduced and discussed but not deeply explicated.

5.1.2 Corporate Social Responsibility as Philanthropy and Collective Behaviour

Generally speaking, one dimension of CSR is philanthropy. Hence, terms close to that – such as altruism - can be introduced to shed light on this dimension. Indeed, altruism a a form of behaviour can provide a starting point for encountering philanthropy. Though altruism *per se* expressing humans' intentionality (challenging the prevalence of egoistic behaviour among people) is probably typical for more of people than of (business) organisations, a suggestion of prudential behaviour cannot be neglected. This behaviour characterises the activities that help the other actors (and their decisions-makers) take positive actions after a first positive act indicating benevolence. This means that the 'proactors' can encourage the others to take (positive) reciprocal actions providing good in an network once they trigger positive development. In the case of pure altruistic behaviour, however, the proactor is not waiting for any reward (a positive response by the other actor). In this sense there should not be any strategic calculations or speculations of current or future benefits (such as increased profits through better image).

The following depiction contrasts egoist (as with business actors) behaviour to altruistic behaviour (more typical of human actors)

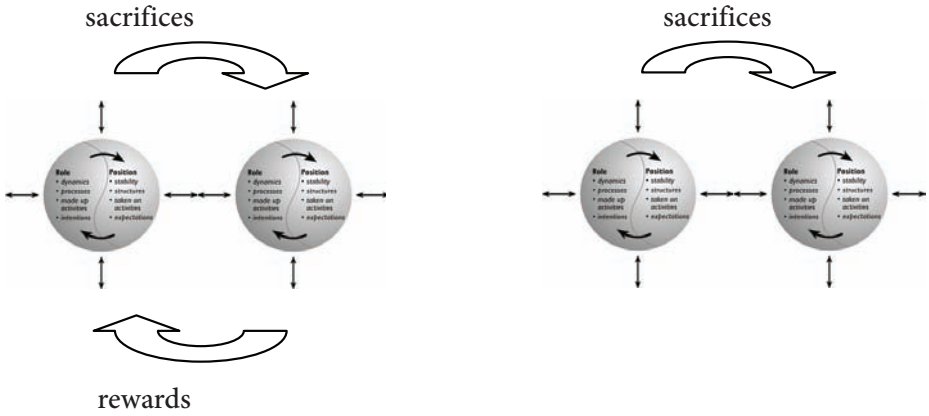

Figure 12. Contrasting Selfish and Altruistic Behaviour

It can be claimed that selfish behaviour (and its motivation) is actually a method of doing business as usual: the give includes the presumption of a get. The rewards are quantified by estimating the future profit potential the measure (sacrifice) may have in the long-run.

Hence, it is worth questioning, to what degree the activities for increasing responsibility are really altruistic, in which one actor makes sacrifices unilaterally while the others benefit. Perhaps it could be said, that the policies can in fact be characterised as selfish: the pro-actor benefits (more or less) at the expense of other/s (re-actors) though not immediately or directly (compare to setting A in Fig. 2). Mutual benefit is probably not unselfish, but it is achieved in reciprocal and harmonious co-operation as both the actor's benefit (though not equally; compare to setting C in Fig. 2). It can be hypothesised, that all business transactions are subject to some form of selfish behaviour (even symptoms of greediness are, according to some scholars, reported). An exchange, in which the rewards and yields are divided and shared, is the major process in this behaviour.

Indeed, the interaction that takes place in all relationships, comprises processes of exchange. On an operational level the financial and non-financial transactions are examples which characterise exchange. The social side of exchange, in turn, is seen as a bundle of societal processes on different managerial levels. Despite the fact that exchange is assumed to be an ontological concept, it is often not explicitly embedded in studies. The major reason for this is that some writers claim that it gives quite a narrow view of the relationships and is even contradictory in nature. Hence, exchange can have a short-term notion (of discrete transactions) whereas relationship is a long-term notion implying the association of two parties. Value (economic, non-economic) is embedded in exchange. Indeed, a continuum of exchange forms can be expressed, starting from pure exchange with dis-

crete economic exchange, to pure gift transactions in which no economic expectations from other party are required (compare to philanthropy as part of CSR).

One of the points of exchange is the question of transferability. As already discussed, some philosophers tend to distinguish between collective responsibility and individual responsibility. Exchange of knowledge implies its transfer: it can be evident that the norms, practices, and policies associated with responsibility are the result of transfer. Hence, it is assumed that more focus is required to properly understand transferability in collective responsibility. To put it simply, often the increased interest in responsibility is actually a consequence: an obligation to do something good (and visible) caused by the pressure of others. Though widely discussed in modern sociology (paying attention to positive and negative effects), little research work exists in logistics. Therefore, there is a need to cope with the questions of e.g. how dimensions of responsibility are exchanged and transferred.

As a result of (organisational) proximity, the actions of the actors tend to have similar characteristics, as they are continuously subject to frequent interaction. In addition, a specified category of actors (e.g. a net) tends to recede from other groups and from their norms. The proximity (closeness of actors) is often organisational but - as in the case of IFT - also physical and/or geographical. The closeness-remoteness- aspect needs to be incorporated in a network-based analysis.

Unlike conventional SCM/network approaches, in the field of modern geography the spatio-temporal dimensions are widely analysed (see e.g. Oinas 1998). Castells (1996, 376) hypothesises that actually *'space organises time in a network society'*. This statement assumes the domination of space by time. Unquestionably Castells is interested in the social meaning of time analysed with the help of social theories rather than geographical or logistical models; in this sense the proposals are consistent with ideas investigated in this thesis. For Castells (1996, 410) space is the expression, not a reflection of a society, which is networked. For him spatial forms and processes are formed by the dynamics of the overall social structure or social processes. Furthermore, *'space is crystallised time'* (ibid. 411). The distance has two contents: in the infrastructural networks the term refers to the physical distance whereas in the inter-organisational networks it refers to the organisational proximity. In general, the distance is impedance between two locations, often the organisational position of one (focal) actor *vis-à-vis* the others. The distance perceived as an obstacle is specially an important attribute in explaining the co-existence phase of network formation. This is one the stages leading to deeper co-operation among actors in the net (Easton and Araujo 1992, 71-81). The distance can be defined as friction - impedance indicating spatial separation or segregation - between two points. This friction is an obstacle or hinder for interaction in space thus reducing the amount and frequency of interaction. Graphically, it is possible to describe the correlation between distance and interaction by using distance-decay curve. A graphical presentation is a downward-loping curve expressing a simple trade-off: spatial interaction tends to fall off with distance.

As related to responsibility, it can be suggested that there is critical point after which, not only the interaction, but also the scope of responsibility can diminish. Often this influential boundary is the edge between 'us' (with frequent interaction and division of responsibilities) and the 'others' (some or no interaction due to distance; issues of responsibility not neglected but are of secondary importance). The boundaries of nets (in contrast to the entire network) are based on the socio-emotional and cognitive processes possessed by the actors (as independent decision-makers). In this sense, a net - not the entire network - is an embodiment of the coherent and collective space, in which the issues of responsibility are encountered and handled.

Indeed, in contrast to geographical distance locating e.g. facilities, cognitive distance can be of major importance for the actors when they perceive and interpret their own outer reality. This conceptualisation can be classified as subjective distance. In this sense Piaget's developmental theory (Piaget's fundamentals: perception and conception of single items among individuals mainly children including space, or physical causality) can be integrated with spatial context and analysis. Each individual goes thorough different stages in their life - from infancy to adulthood - continuously creating mental or cognitive maps from the surrounding reality. Information is filtered and is a subjective perception of reality and real-life circumstances. Thus, an individual continuously assesses the alternatives and with the help of cumulating knowledge, re-locates points in mind and consequently evaluates the distance e.g. with the help of mental maps. In the constructive paradigm of behavioural sciences, it is assumed that each individual adds new solutions and knowledge to the solid basis, which is constructed over time. The cognitive distance is a result of personal experiences with attitudes, values, norms, preferences as critical forces and drivers. Undoubtedly, with the help of cognitive processes (reflecting the existence of one's own focal net/world - the edges of being) the actors also outline the limits for their collective responsibilities. The cognitive – or psychic distance concept – is also essential in the studies related to aesthetics (referring to a distance between an observer and a visible objective).

5.1.3. Corporate Social Responsibility and Risk Management

Mathematically, a risk can be exemplified with a simple formula as follows:

R = P (loss) * I (loss), in which
P = probability of risk (frequency) and
I = significance and importance of the consequences and influence (e.g. lost opportunity/expected loss).

Generally speaking, risk is a continuum between absolute certainty (e.g. all the risks can be managed and avoided) and impossibility. It can be broadly defined as the probability of variation surrounding an anticipated outcome (Carter and Rogers 2008, 366). As related to CSR, companies need tools for predicting and estimat-

ing the risks which stem from environmental concerns or from the areas, locations, and communities in which they are situated. Risks can also have an historical basis. In the field of risk management, firms deal with uncertainties and vulnerabilities. Uncertainty is a lack of complete certainty. In short, reality is enigmatic.

There are, certainly, various ways to consider the risks, whether they are environmental, or technological, or other by nature. Metzner-Szigeth (2009, 159) argues that the discussion on risks can considered in at least two ways. One is to assess their validity (related to the complexity of the bio-physical world), especially considering (if possible) the interdependencies. The other is to judge them by *'setting them in the context of their socio-cultural complexity and to ask to whom they are of avail or of disadvantage'*. This also requires the discussion on how trustworthy the originators are, and whether or not they are complying with generally recognised convictions.

To summarise the multiple environmental risks, the following categorisation can be proposed (quoted in Derwall *et.al* 2005, 54; original source Innovest 2003):

- historical liabilities: the risk resulting from previous actions,
- operational risk: risk exposure from recent events,
- sustainability and eco-efficiency risk: future risks initiated by the weakening of the company's material sources of long-term profitability and competitiveness,
- managerial risk efficiency: ability to handle environmental risk successfully and
- environmentally related strategic profit opportunities: business opportunities available to a company relative to industry peers.

The existence of corporate vulnerability connects the actors with their environment (e.g. a net(work)) as many risks - though not all - can be shared or transferred. Indeed, risk is an expression of various threats that can have a strong negative influence on the actors' attempts to perform and reach a planned result. In case of SCM, the risk can be seen as the ability of a firm to understand and manage its economic, environmental, and social risks - in the supply chain (or net(work);Carter and Rogers 2008, 366).

Currently, some scholars have adopted the idea of shared value when explicating the risks (and rewards and benefits too; see e.g. Porter and Kramer 2011). These two terms cannot be regarded separately. This means that not just the company's success (estimated e.g. in terms of profitability), but also risks in handling societal and environmental issues are truly *inter*dependent. Hence, it is proposed that there is a strong interplay between profits, people, and planet on the one hand and the risks on the other. All these dimensions of triple bottom line thinking need to be associated with risk analysis. Value adding activities by firms have a strong linkage to these non-financial dimensions.

In short this means that if the economic value is equal to perceived benefits divided by total cost of ownership (TCO), company can e.g. consider environmental-friendly service production (numerator in ratio) and reduce harmful emissions (reducing the cost of acquisition). Hence, the risk/s aassociated with economic value-added functions often cause extra costs (internal or external) in service production. Therefore, the actors (such as LSPs) need novel ways and policies for capturing and creating value. However, without paying attention to all the risks involved in operations and decisions, the extent of responsibility cannot be understood either.

5.1.4. On Aesthetics

'An aesthetic principle is realized in the economy of the system and harmony of the parts. Everything is necessary, nothing is superfluous' (Sepänmaa 1986, 129)

Generally speaking, aesthetics cannot be regarded as a dominant conception in CSR. This is true particularly when defining this term in the well-known manner referring to issues of beauty. Sustainability is instead related to certain principles and policies, which have an abstract nature. One of the most prominent scholars in the history of aesthetics, Hegel, in his *Lectures on Aesthetics*, used the following definition for expressing the essence of aesthetics (quoted in Naukkarinen 1998, 8; original source Hegel: Vorlesungen über die Ästhetik):

The present course of lectures deals with 'Aesthetic'. Their subject is the wide realm of the beautiful, and, more particularly, their province is Art - we may restrict it, indeed, to Fine Art ... The proper expression, however, for our science is the 'philosophy of Art', or, more definitely, the Philosophy of Fine Art"

Accordingly, aesthetics can be seen as a study of art and artistic appreciation. Among many topics that are associated with this is the extent to which our experience and appreciation of art is similar (or different) from our experience and understanding of nature. In order to discuss aesthetics (as the dissection and nature of beauty), it is explicitly presumed that a visible aesthetic object/s is needed (certainly added with an observer). The intangibility or invisibility of the issues (that is: impressions provided by senses other than sight) ought and cannot be a part of aesthetics. In IFT, the tangible is the infrastructural network, equipment, and resources needed to run the required operations. As a matter of fact - and at the first glance - the actor networks (tied up with various relationships) seem not to have any features of aesthetic dimensions.

Aesthetics is, however, somehow engaged in many of the practices and policies managed by human actors. Hilde Hein claims that aesthetics is present practically everywhere as she says that *'the aesthetic dimension, in a manner of speaking, rides ''piggy back" ad infinitum on all our experiences, thoughts, and feelings. We can divert our attention away to consider things refracted otherwise, but the aesthetic is a*

presence accessible to, if not directly before, consciousness. It haunts the edges of being .... ' (Hein, cited in Naukkarinen 1998, 48). Though beauty may be a reflection of something very important - though not always explicit - it is not easy to find any evidence of its relevance in (business) networks. Monk Serafim (Seppälä 2010, 8, translated by MN) remarks that when *'big corporations are seeking for values, issues like ethics, authenticity, and moral are addressed - not beauty'*.

Concentrating on discussing the aesthetic dimensions actually means that a wide spectrum of personal experiences and their perceptions can (and should) be under scrutiny. Instead of paying attention to the aesthetics of the visible (e.g. infrastructural elements, products, artefacts) the question of how individuals (as actors) interpret their outer reality and how the idea of that which is perceived as aesthetic (e.g. beautiful) influence the values of the actors. There are different kinds of manifestations through which aesthetics can be experienced - the question is how long (or short) a time the manifestation is present (Naukkarinen 1998, 154) Often, and historically prevalent, these experience/s are in conjunction with contemplative efforts of a man or an actor. In this sense, e.g. the concept of altruism can even be categorised as a form of aesthetics (compare to philanthropy as part of CSR): selfish motives cannot provide any reasons for morally valuable and aesthetically sound activities. Undoubtedly, aesthetics has various multiple dimensions, which could contribute to a discussion of responsibility. Though important, they are, however, excluded from this study: e.g. in aesthetic ethics (one branch in the flourishing tree of the subject) it is presumed that the entire spectrum of human conduct and behaviour can be understood through that which is attractive. In addition, some scholars claim that beauty corresponds with the Truth.

Considering the activities required to do something, it's not a question of relevant policies targeted towards more responsible behaviour, but also how a decision-maker (representing a network actor) considers subjects of their own world *a priori* and *a posteriori* these decisions. Responsibility is, so to speak, something that the companies do not really need as they consider those activities on voluntary basis. Moreover, if the (business) actors cannot determine, estimate, or quantify accurately the anticipated benefits, they may show reluctance and unwillingness to truly embrace these questions.

Rational decision making is, however, just one part in the decision-making process. One cannot deny the fact the voluntary nature of related policies can decrease actors' interests especially if the decisions do not cause any positive emotions and feelings of doing good. Hence, responsibility stems from rational and irrational sources (remembering, though, the limitations of bounded rationality). A positive attitude (or even an emotion) that decisions, we are engaged in, are really needed and do good for others cannot be under-estimated. Accountability may require a balance - or harmony - between various issues. Probably, this is close to an aesthetic experience, though some scholars tend to underline that e.g. feelings or impressions are irrelevant to true beauty (and hence to aesthetics as well; see Holgate 1992, 3 for more discussion).

Nevertheless, aesthetics should reach beyond the art world as Naukkarinen (1998, 8) claims. This means that a refusal to see art as separate, even isolated, order of life can provide an appropriate point of departure for deeper analysis. Therefore, it is not possible to discuss environmental concerns without paying proper attention to aesthetics as well. Indeed, and considering the historical roots of this discipline, some philosophers have connected aesthetics deeply with nature and environmental issues. More recently many writers have followed the classical scholars in that nature-oriented environmental aesthetics has become its own important strand within the field (Naukkarinen 1998, 8).

Unlike the triple bottom line suggests (environment understood as a natural environment), in aesthetics environment is pertained in a larger framework. Environment actually refers to the entire external world of an actor: besides the natural environment it also includes the cultural environment, and the constructed environment (Sepänmaa 1986, 17). This means that studies on sustainability should not concentrate only on discussing the negative impact of the actors' decisions on pristine nature, but also e.g. on the built environment. The investments required to develop IFT (e.g. new areas for seaports, dry ports, terminals) often destroy or damage the cultural environments and the objects located there. Though service providers often do not make any remarkable direct investments (certainly they are often engaged e.g. in terminal construction decisions commissioned by them or by the investors), their decisions as regards, for example, routing, influence the layout and design of the infrastructural networks.

Aesthetics, particularly if, (and often when), associated with topics of beauty (and the various attributes of the conception), is not distant from harmony (compare to Fig. 3). As regards the major concepts of this study (e.g. role/change-position/stability- dualism), one can say that there is - to some degree at least - an implicit assumption of harmony between the opposite sides. This harmony is based on the idea of transformation, which contains both sides of the opposites. In full harmony symmetry of the Things is resulted (compare to Fig. 1 and Fig. 4).

Aesthetic experience is relevant e.g. when an actor contemplates the optimal balance between the different dimensions of triple bottom model - how to create a harmonious, well-balanced *status quo* for the elements in the intersection area. This mental process is as much emotional as it is cognitive, and is certainly beyond full conscious rationality. On the other hand, this can be misleading too: because the visual appearance of this model is so appealing, it may lead to the naive conclusion that the dimensions can truly be integrated. The beauty of the depiction (at least the visualisation) hides the disaggregated and discrete, even fragmented nature of the things and concepts. Probably, there is no option available, at least theoretically, for harmonious integration.

In contrast to the western tradition, Chinese philosophy often stresses the need for balance between different, even distant topics (e.g. man and nature). Generally speaking, this encourages the virtue of magnanimity - a feature that is high-

ly appreciated in this cultural context. This implies *inter alia* that actors must defuse complicated contradictions (compare to discussion in subchapter 3.3.2). The tensions between the things (the dialectical confrontation) must be released somehow, as they are not accepted.

Though Chinese philosophy places considerable emphasise on harmony, there are some variations and different interpretations of this concept: the well-known yin-yang- constellation is actually based on the search for harmony as these terms can be seen as different and contrasting aspects of balance (compare to Fig. 1). Hence, it is important to establish (conceptually, pragmatically) an appropriate relationship between these two sets of forces. The knowledge of how these contrasting forces can bring them eventually into balance expresses the depth of correlative thinking.

Research on aesthetics always deals with the balance between the dimensions of the study, whether the elements are visible (e.g. balance between man and nature) or more invisible and abstract (such as transportation networks). Acceptance of immanence is, however, a precursor of the analysis.

Despite some efforts to integrate the issues of non-art to discussion on aesthetics, there still seems to be a scarcity of related studies - this is particularly evident with CSR. Probably this is due to the fact that the time horizon for analysing and understanding the true influence of value-based decisions should be long enough. Use of retrospective screening and inherent methods together with the unconscious mind is difficult to handle in pragmatic research work - *'traces of moment of active and conscious use of aesthetics sometimes persist very long even at the tacit level'* as Naukkarinen (1998, 155) points out.

In this study, aesthetics - particularly if emphasising the harmony of things - provides a stabilising worldview for the contrasting elements under scrutiny (e.g. conflicts, contradictions, collisions). It is assumed that there can be harmonious conceptual co-existence of the issues under consideration in spite of severe difficulties in consolidating concisely the terms and their content. The aesthetics, at least implicitly, are also supposed to be strongly (though invisibly) involved in most of the decisions made by the actors. Aesthetics as a study of what is immediately pleasing - to visual perception and to our imagination - can support the analysis with subtle tones. Naukkarinen (1998, 203) nicely highlights the specific role the aesthetics (or 'aestheticization' as he proposes) can have as he writes that

''Aestheticization' refers to the notion that more and more things get absorbed into aesthetic sphere, and that aesthetics matters are becoming increasingly important in our daily life. This suggests that it is aesthetics ideas, skills and conceptions - in short, aesthetics - that are used as means of navigating in the world. Criteria for choosing and doing things are above all aesthetic, ... '

5.1.5. Critical Notes on Corporate Responsibility

In spite of its popularity in contemporary business discussion and rhetoric regarding both the content and its implementation, CSR has generated criticism as well. The primary argumentation against CSR is that a company's major purpose is - always and unconditionally - to maximise profits and subsequently transfer enough high returns to the shareholders. The other aspects of triple bottom line - people and planet – must be subordinate to the major objective of the firm. Moreover, if ethical and environmental standards will raise the prices (e.g. freight rates paid by the customers), the policies can be regarded as disadvantageously lowering the profitability. The trade-off between e.g. economic efficiency of a firm and peoples welfare is - probably - impossible to solve adequately because companies are obliged to reach their financial targets. The opposite contradictions cannot be adequately solved but rather proposed or discussed in a non-extensive manner. The subjects under study remain - more or less - separated: '*... an executive's commitment to CSR is inevitably circumscribed by profitability*' as Scott (2007, 35) puts it. Though companies express increased interest e.g. for considering environmental issues, the basic purpose of the companies - to make more profitable business - is a true obstacle for substantial success in incorporating other aspects to business policies. On the other hand, there are also the challenges of how to quantify the positive impact of socially-oriented initiatives particularly in SSCM: many of the misperceptions include the lack of explicit incorporation of economic performance into social responsibility frameworks.

Defenders of CSR claim that various dimensions are not inseparable but strongly linked to each other. The assumption of a profit-seeking company is realistic as it aims at finding a dynamical balance - not a stable or loose equilibrium - between different wants and views. A profitable firm can more seriously consider environmental and societal issues, not a poorly working one. This realism often encourages firms to consider more seriously various, though contradictory, policies.

Hence, it is worth discussing how responsible firms are truly willing to be and furthermore, what the motives for running more responsible operations are ? Under the assumption of a company seeking profit, a firm wants increase its profit level e.g. with a positive image achieved through more responsible activities. This is obviously the major motivation to be more responsible. Increased reputation provides the firm with increased visibility which later increases firm's social license to operate in society (Bhattacharyya, 2010). The other major reason is related to trust: a more responsible image of a firm influences the other actors in the network to behave in the same, trustworthy way. The proactors and/or reactors can truly rely on the initiatives and practices conducted by the others.

In creating more competitive strategies, firms are more likely to focus on their core capabilities and competencies. They are not willing to cope with issues which are not related to their primary tasks. Under these circumstances, it is appropriate to ask to what extent are they ready to concentrate on the activities which are beyond their core business areas - especially if these activities do not sufficiently provide

any clear options for increasing profitability. It is, however, often very difficult to quantify these benefits caused by a better image. Despite the fact that many scholars defend the long-term benefits of CSR (e.g. stronger competitive advantage, positive development of profits), there have not been enough studies yet, which could explicate the true success of these strategies. There is still quite a small quantity of research work in this field with limited amount of retrospective data.

It is also worth discussing to what extent even the concepts created to understand human motivation and purposes (including role, position, responsibility, trust) are appropriate in the case of organisations and firms. Is there an option for misunderstanding if the theoretical discussion on responsible behaviour of human beings is transferred to business context in too liberal a manner? Milton Friedman, when strongly arguing his viewpoint for social responsibility, says that *'a corporation is an artificial person and in this sense may have artificial responsibilities'* (Friedman 1970, 4). What are the consequences for analytical attempts, if one cannot link properly human beings and their organisations? Unlike the claims of some scholars, it can be so that what is (or ought to be) typical of people is not typical for firms. Individual responsibility is - if not totally similar - very close to collective responsibility and can be used to describe the collective behaviour of business) actors as well but only in a limited manner. Are the metaphors, that are introduced and employed in analysis truly relevant?

The questions mentioned in previous chapter are essential for modern network analysis, as it is strongly rooted to sociological sciences (such as social network theory) and their theoretical articulation. Network approaches (there are many of them) employ the idea of metaphorical thinking. Hence, even the core concept of network- related studies - the network - is more or less a metaphor. Generally speaking, in an actor-based analysis, in addition to a general understanding of the regularities, the analysis of the metatheories/y and the major ontological concepts is a prerequisite. Despite the influential benefits provided by metaphorical thinking, it must be claimed that a chosen metaphor *hides as much it reveals.* In this sense e.g. discussion of collective responsibility carried out by human actors' may not be valid for understanding the conformities of actors in business networks. Probably, the 'interpersonal' of networks has its appearance and content in a different way than the 'inter-organisational' that is studied.

Instead of paying attention only to organisations, the current debate obviously, though not explicitly, centres on individual actors as well. However, these attempts at explanation pose difficulties in understanding the topic of free will, which is presumed to be in the essence of human behaviour. Individual responsibility can be characterised by free will in contrast to collective responsibility, which is constrained by different things such as expectations created by the others and contractual ties. This free will of single human beings can be seen in collective behaviour as well reducing - probably - the interest in common articulation. Scott (2007, 32) notes that 'in a society whose members increasingly *''look to themselves", each stakeholder will tend to support his or her immediate interests, mak-*

ing meaningful consultation difficult'. In this sense, community members represent different worldviews and interests, and they also provide different content for responsibility. Some network participants may disregard environmental issues (more or less), whereas others feel that these issues should prioritized in decision-making. Therefore, it is very difficult to handle and analyse these entities as a common unified entity with clear common will. It does not provide a valid point of departure for subsequent research work either.

Despite the fact the firms as actors seem to depict their engagement in net(work)s with concepts like role and position (thus defending and justifying their scientific use), it must be remembered that quite difficult theoretical concepts are analysed. Roles are based on intentions (compare to Fig.1) - the question is to what extent it is possible to truly uncover the attributes of intentions. If responsibility is associated with the position of an actor, how should this be scrutinised consciously by analytical means? Is responsibility - more or less - a bundle of ambiguous and equivocal expressions typical of contemporary strategic thinking but with no true empirical nor theoretical relevance? Hence, it is very difficult to grasp these issues.

Finally - and as already noted - CSR as a purpose to increase good and welfare for stakeholders is not actually a new concept. One cannot deny the fact that the novelty of this strategy is probably not adequate. Companies have always - more or less - been involved in voluntary practices, which create more welfare for the people they are interested in. It is quite obvious that in the past, numerous firms were even keener on practising and implementing these positive policies than they are today. In other words, *the current interest and measures among many players for running CSR-related policies do not even achieve the levels of past*. Therefore, the contribution of corporate responsibility - at least in historical perspective - can occasionally be modest. Certainly, all the attempts to integrate CSR policies in strategies are positive if the inherent measures are more than nothing, but for many firms it is still a long and troublesome road to take.

5.2. Attributes of Eco-efficiency: Environmental and Societal Issues

'Companies adopting eco-efficiency are most often the leaders in their sector. As their success inevitably and constantly provokes many others to follow, eco-efficiency will finally grow into mainstream' (Bosshardt in WBCSD booklet 2000)

The term eco-efficiency was introduced by the World Business Council for Sustainable Development (WBSCD) to describe a desired scenario, in which more (products, services) is/are produced with few(er) resources. According to WBSCD, eco-efficiency is a management philosophy, which encourages a business to search improvements that yield parallel economic benefits. Consequently, this means less harmful negative impact on the environment and people. This also means that the task is to ensure the profitability - not to make good: more responsible behaviour means that a company can make more profit.

WBSCD has listed some broad activities for this initiative. Reducing the consumption of resources, reducing the impact on nature, and increasing service value are the major guidelines for companies which seek for more eco-efficient practices. One way to estimate the degree of eco-efficiency is to calculate the ratio of output (e.g. the value of services) divided by the input (the sum of resources). Hence, it combines economic creation (value-added) with ecological destruction.

Irrespective of conceptual and pragmatic differences, development projects on eco-efficiency indicate that it is possible to categorise some major tasks in implementing the respective activities. Companies can first re-engineer their processes to reduce the consumption of resources and then co-operate with others. Firms can also become more eco-efficient by, re-designing their products or services and/or find new methods to meet the needs of their customers. Customers may not need any new products or services but rather solutions to their problems (intangible solutions to tangible problems). Undoubtedly, all of this requires specific measuring and reporting systems to ensure the overall eco-efficiency performance.

In general, there are different ways of approaching environmental issues. In a very broad context even studies on behavioural aspects and community-related issues and can scrutinised. To conduct research work e.g. on landscape is also possible: in the field of transportation, questions such as, how does the size and spatial distribution of transportation-related investments affect the evolution of some species prevalent in these areas can be studied. Landscape-based analysis is therefore a study of the causes (whether triggered by nature or mankind) and the consequences for spatial patterns in the environment. There are various applications of landscape ecology to name e.g. ecosystem management and land-use planning. These research subjects fall into the category of aesthetics. Therefore, the philosophy of environmental aesthetics can provide some conceptual tools for understanding the extent of environmental and ecological issues.

In brief, environmental analysis approaching the world of ecology can be defined as an urge to study the relationships, distribution, and abundance of organisms, or groups of organisms, in an environment (Dodson *et al.* 1998, 2). Like the other disciplines representing modern research methods, ecology is not a unified field of study: it is actually made up of a number of different sub-disciplines, each them having its own distinct way of thinking. Environmental ecology addresses more carefully the true impact of human behaviour on nature e.g. assessing the toxicological effects of certain substances.

Societal factors cannot be disregarded when discussing eco-efficiency, though it has been argued, that predominantly a firm is probably not a social actor. However, there is lot of evidence that they have been engaged in activities, which e.g. increase the employees' willingness and ability to perform better. In addition, traditionally companies have created different policies for improving conditions and welfare for the local areas and communities in which they are situated. WBSCD wants to address the issue that responsible businesses should aim to improve quality of life. The question is what the scope of the area is: inside one's own focal net or beyond it.

The social issues can be depicted in various ways beginning from activities in a firms own (local) net (e.g. including the policies for ethically accepted behaviour, employees' rights and working conditions) to wide network influences - often on a global context (e.g. promoting democracy, and transparency, reducing poverty and the inequality between rich and poor, participation in development programmes).

The current literature on social responsibility is diversified and not unambiguous. Vallance *et al.* (2011, 4) claim that studies on this topic actually create a rather obscure picture as the discussion *'is somewhat chaotic and sometimes contradictory or confusing'*. They argue that there are certain attributes which cause conflict. The following binary pairs are proposed to aid better understanding of the apparent contradictions:

- what people 'need' (development) versus what is good for the bio-physical environment (bridge)
- what people 'need' (development) versus what people want (maintenance)
- what is good for the biophysical environment versus what people want (maintenance)

The binary proposals are close to the basic models as presented in sub-chapter 4.2: anthropocentric, eco-centric, and business-centric views approach these questions in a different way (discussing what is good for the people, or for the environment, or for the business, respectively).

By using the following key considerations, Vallance *et al.* (2011, 4) categorise social responsibility by using the following strands (Fig. 13):

The result of this conceptual illustration, a threefold schema, comprises the following dimensions. In their wording, development sustainability addresses the basic needs, the creation of social capital (and so on); 'bridge sustainability' con-

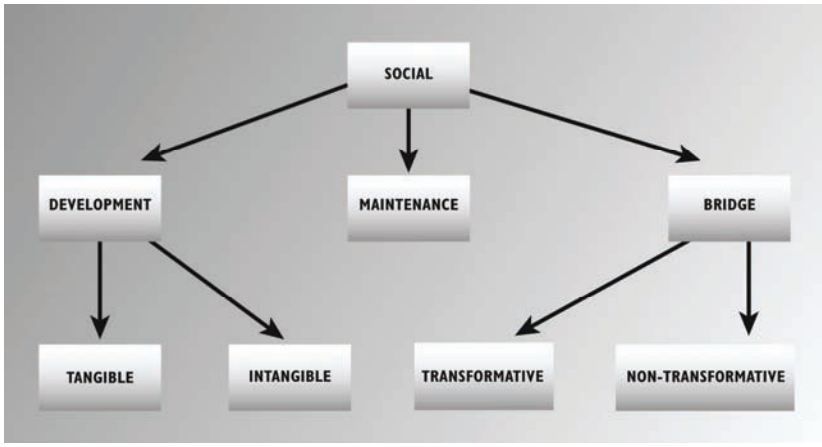

Figure 13. Strands of Social Responsibility

cerns changes in behaviour to achieve bio-physical environmental goals; and, finally 'maintenance development' refers to preservation - or what can be sustained - of sociocultural characteristics in the face of change. The last dimension is also manifested in the ways people actively embrace (or resist) the changes. The maintenance dimension incorporates the people's willingness to encounter both the benefits and the disadvantages. Undoubtedly, the acceptance of contradictions is a precursor to this way of thinking. Finally, though interesting, a closer look at these issues is excluded as it requires more in-depth studies.

5.2.1. A Practical Execution: Case SEEBALANCE®

In order to describe responsibility (including efficiency and eco-efficiency) as a form of strategic tool, a case was chosen. Due to the complex nature of the strategy in this case, only a short introduction is provided. Special emphasise is paid to the environmental and social dimensions.

The name of this policy, SeeBalance, refers to socio-economic analysis as created, developed, and maintained by BASF together with some scientific universities. The analysis contains the three major determinants of responsibility. One of the major advantages of this tool is that - besides assessing environmental impact and costs - it considers societal impacts of products and processes. In addition, this approach enables the actors to quantify and measure the effects as well.

According to experiences by the case company, eco-efficiency is determined by some critical aspects as follows (Saling *et al.* 2002, 2):

- calculation of the total cost from (final) customer's viewpoint
- preparation of a specific LCA for all investigated products according to rules of ISO 14040
- determination of impact on the health of people
- determination of dangers to the environment
- determination of risk potentials
- weighting of LCA
- determination of relationship between ecology and economy
- analyses of weaknesses
- assessment of scenarios
- sensitivity analyses
- business options
- inclusion of social aspects (optionally)

The determination of environmental impacts is carried out with five main aspects: the consumption of raw material, the consumption of energy, resulting emissions, the toxicity potential, and abuse and risk potential (Saling *et al.* 2002, 3).

Social aspects, which are analogous to environmental ones, are summarised and defined as social fingerprint. After measuring the social impacts of sustainability, the company can later incorporate them into existing eco-efficiency analysis. The method used for determining the social profile of the enterprise is depicted in Figure 14 (source Saling *et al.* 2002).

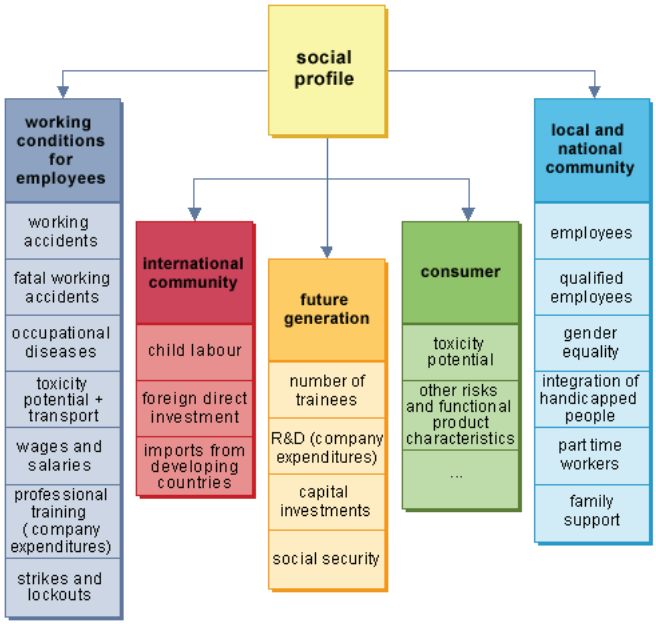

Figure 14. Social Aspects of Sustainability according to BASF

In the applied model, five different stakeholder categories for estimating the influences are presented, employees, international community, future generations, consumers, and local and national community. Internal impacts on the community level are assessed with different criteria including the number of employees, gender equality, and family support. The consumer category includes some aspects (e.g. toxicity potential) which are close to environmental analysis. The contribution of this model is that toxicity potential is widely assessed, as many LCA approaches do not explain these issues comprehensively.

Despite these methods and their benefits, a more comprehensive social life-cycle method or procedure needs to be developed, particularly on a network level. BASF, as many other actors also do, tends to underline its own policies regardless of the fact that the business performance is a actually the result of various other players on a net and/or network level.

6. SUGGESTIONS FOR EMPIRICAL ENDEAVOUR

Due to increased interest in considering CSR among logistics service providers, there is a growing interest in rethinking their strategic aims. Hence, a great number of companies currently benchmark the responsibility strategies of the cutting-edge firms in order to improve their own performance in a more global market place. The roles and positions of these firms in their own networks influence how e.g. IFT- related actors adopt these new practices. When the responsibility is under scrutiny, it must remembered that intermodal freight transport is often caused by the transactions and primary contracts between some other parties than intermodal operators. Indeed, the need for intermodal transportation service is generated through the diverse commercial transactions between the sellers (often a producer/manufacturer purchasing materials and services) and the buyers (who can be receivers or other companies representing the primary parties).

In geographically large networks, the transportation service is a necessity, when a shipper - with the help of an intermodal transport operator - wants to provide value-added services for the customer, which is often, but not always, a consignee. These companies aim at encountering the issues of responsibility in line with their own strategic purposes. Accordingly, there is no need to procure or provide intermodal freight transportation service without the primary commercial relationships between the major parties. The ultimate customer as an end-user in IFT is either a seller – as in most cases – or the buyer, depending on the legal and contractual responsibilities as stipulated in the primary contract. However, in IFT transport the buyer can also be e.g. a port operator or stevedore company. Hence, the classical dyadic seller-buyer- setting with shippers and receivers does not always work as an explanation. Moreover, neither does it provide any guidance for discussing the topics of responsibility.

From a practical and legal point of view, the use of trade terms/terms of delivery is a necessity in order to set the terms and conditions of the obligations and commercial responsibilities between the seller/shipper and buyer/receiver, and thus for other major parties as well. Furthermore, the freight forwarder as the TPL carries out most of the activities that are needed to accomplish the obliged transportation service. The responsibility that is discussed in this study expands the area of interest by also considering the non-legal and non-contractual issues of responsibility.

The carriers and Intermodal Transport Operators (ITOs) have a variety of different strategies for operating intermodal freight. The chosen strategic course of action influences how a company can embrace different aspects of responsibility. This is particularly evident with environmental issues. Hence, different options have a different impact on triple bottom line thinking.

When studying IFT networks, a distinction can be made between different networks. To simplify the setting, concrete networks (infrastructural networks) and abstract networks (including firms, organisations, but also groups of people) both exist. This is nearly parallel to a classification between physical and non-physical networks, which is also widely applied. Conventionally, an infrastructural network (of IFT) can be defined as a set of connected nodes and links. The research work into physical networks includes topics such as the infrastructure of traffic (of goods and people), spatial interaction, the optimal routing with deeper analysis on bottlenecks and barriers, and technological nets

A network as a reflection of social structures consists of different types of social relationships between the partners (named as actors) involved. A network is thus a model of a complex reality or a view with a distinctive nature. Using this simplified and dualistic distinction, both of these networks are interrelated: the character of an infrastructural network influences the networks of actors and respect policies of LSPs. Accordingly, the operations (and policies) of the service providers are constrained by the physical limitations of the chosen network. This implies that an actor is obliged for certain strategic decisions because of limited geographical coverage and content of the physical network. This is especially true with rail based solutions as there is often quite a small number of viable options for running the operations efficiently and eco-efficiently. This also implies that choices the actors make are nearly always bounded by the scarcity of available routes and resources. Indeed, the major barriers for the growth of IFT are related to infrastructural networks. Besides lack of spatial coverage, there are problems such as non-adequate terminals, insufficient infrastructural interoperability, missing links and bad access to attractive slots. (Woxenius and Bärthel 2008, 30). Obviously, these factors can reduce the interest of the actors to consider the environmental issues more carefully and properly. In brief, one must do what one is able to do with a given number of options.

One of the problematic issues in IFT is that there is a sharp trade-off to be solved: customers, like shippers and receivers, require services on more globalised scale resulting in greater distances. This means that the transport intensity (estimated e.g. by comparing the distance travelled with unit shipped) is continuously increasing, not decreasing (implying de-growth strategy). This can be very harmful for the major objective of avoiding environmental depletion. There is, however, a number of methods to improve the transport-intensity. Christopher (2011, 245-246) lists the followings:

- review product design and bill of materials (can influence e.g. physical characteristics of the product, its density, and ease of recycling)
- review sourcing strategy (sourcing decision often leads to off-shore/overseas procurement in low-cost countries; new ways of purchasing - and the costs associated with that - need to be included into total cost of ownership analysis)

- review transport options (different modes have different impacts on carbon and other emissions - new buildings can more properly consider the need for decreasing emissions)
- improve transport utilisation (e.g. more efficient vehicle capacity planning, more return loads)
- use of postponement strategies (e.g. assembly in the final destination to fulfil the need for customisation and configuration)

The list above clearly indicates the problem areas of more eco-efficient IFT: many of the influential decisions for increasing the degree of more sustainable intermodal freight are made prior to any negotiations and discussions with LSPs. Therefore, the carriers and transport companies must often embrace these questions as given facts. Certainly, the situation is always subject to the intensity of communication and relative bargaining power. A well-established relationship between a customer and the third party gives options to all actors to plan more carefully the transport decisions and consider the non-economic factors as well.

Figure 15 depicts the various models the European Intermodal Transport Operators (IMOs) may have in their network operations. As regards the environmental issues, one can suggest that the different models have different influences on the issues of responsibility.

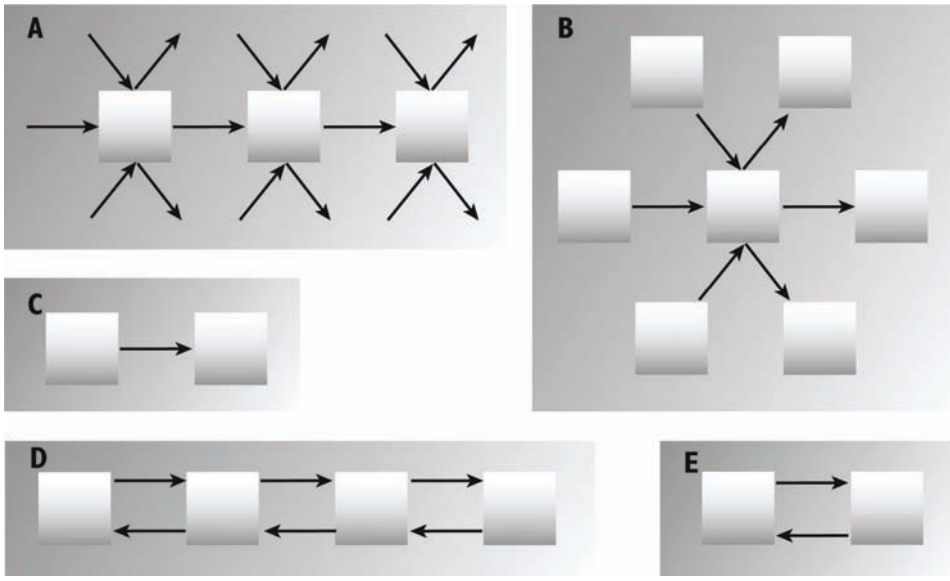

Figure 15. Basic Network Designs for IFT

Considering the limitations the infrastructural elements involve, there seems to be a tendency to consider more the hub-and-spoke- (H&S) model (design B in Fig. 15). This means that there is a centrally located terminal (a hub) and the target is to pass all the cargo through this terminal. The terminal has capabilities for marshalling and ITU/ILU trans-shipments between different trains. The operations

in the hub can compensate for longer transport distances (Woxenius and Bärthel 2008, 24).

There are other strategic options as well. The hierarchic network model (design A in Fig.15) is often a basis for conventional wagon-load operations. Sets of trains operate on some specific route with inherent marshalling yard operations. In this model there are plenty of options for the IMO as regards the routes. There is also the maximum degree of freedom for providing services. The economies of scale-argument defends the use of a direct connection design C in which large volumes and flows are transported between origin and destination terminals. The shuttle train (block train) is an application of the previous model (design E). The fixed-formation train sets operate on some specific origin-destination connections. A more reliable service is resulted having an impact on lower freight rates as well as eliminating time-consuming shunting operations. The service can be adjusted to the needs of the customers and there is also a high degree of time planning. Undoubtedly, this network design is mostly suitable for high-volume connections e.g. between ports and their hinterlands. In the transport corridor design D, trains make frequent stops along a corridor line. High frequency requires tight and precise timetables. (Woxenius and Bärthel 2008, 23-24)

In IFT, there are methods for assessing the environmental impact. Resource depletion is often estimated by calculating the energy consumption. The environmental damage, in turn, can be computed by measuring the aggregate (greenhouse) emissions and air pollution under different models. Often, when various parameters are put together - hence assessing the total impact of all the impacts - a composite measure (of e.g. emissions) can be proposed. Inevitably, the optimal modal split in freight transport affects the environmental issues: e.g. if some line haul carried out by road transport is transported by rail, emissions are decreased and lower energy consumption is resulted.

The previous discussion also indicates how crucial the role of the terminals (such as conventional seaports, dry ports) is if more environmentally-friendly solutions are the target. Indeed, the dry port concept has some advantages, particularly if the environment is under consideration. According to a dissertation by Roso (2007), in the dry port concept the calculated carbon dioxide emissions are approximately 25 % lower, while this concept has also some positive features in reducing the congestion and truck waiting times. In addition, reduced risk of road accidents, better quality of life (due to the fact that some traffic flows are shifted from road to rail), and new incentives for regional development are further reasons which favour the construction of new dry ports.

7. EPILOGUE

'Beauty is a terrible and awful thing! It is terrible because it has not been fathomed, for God sets us nothing but riddles. Here the boundaries meet and all contradictions exist side by side.' (Dostoyevsky in the Karamazov Brothers)

Responsibility as a concept has a diversified nature. Due to this, a reflective method – using different analytical angles in approaching the issues under consideration – can be a valid starting point in research work. As noted in Chapter 4, there seems to be a need to complement the conventional orientations when examining responsibility in IFT. Analytical and/or system-based discussion requires additional proposals for understanding the true nature of the phenomenon (responsibility in the context of transport system for unitised goods). The actor-based orientation (with interaction and relationships in focus) associated with the use of bi-faceted interpretation of the role-position concept can be a valuable point of departure to expand the research horizons. In further analysis, the focus should not be on just operational activities performed by operators, but proper attention should also be paid to interorganisational behaviour and how responsibility is perceived. The actors' (whether firms or individuals or others) subjective interpretation of their own reality (e.g. focal net(work)) is worth analysing. The visions and practices of responsibility stem from the roles and positions the actors may have in the networks.

Scientifically, the actor-based approach is characterised by an interaction type of orientation, which means that future research can be enriched by the proposals, concepts, and ideas often created in social sciences, and more particularly in the social exchange theory. Hence the conceptualisations (and adjacent analytical methods for analysing them) such as role, position, power, embeddedness, and identity are particularly emphasised as having a contributory influence on contemporary IFT research.

New orientations are also needed due to the increased deregulation in rail-based transportation markets. New players are more likely to penetrate IFT markets, forcing the current operators – such as railway companies - to defend their current positions and/or seek new opportunities. A new type of research work is thus needed, as many IFT networks are subject to radical rearrangements in global and national marketplaces: because of increased rivalry (characterised by liberalization), many intermodal service providers (railway companies among others) are continuously searching for new positions, often in collaboration with others. The power of actor-based orientation is acknowledged by its strength: uncovering the dynamics of networks, which provides novel insights into contemporary IFT research work. In the deregulation process, the actors are constantly challenging the current *status quo* both in their practices and in their network relationships. This

can give new rewarding options. On the other hand, the re-position can have an impact on responsibilities.

The business behaviour of business actors (whether employees, groups of people or firms) can limit the options of human beings in their attempts to provide a better life. The better life in developed societies should not rely on the idea of *more* (of something like products, services, experiments) but also of *less* (of, for example useless products or services, which cause dissonance). It can even be tested to what extent the scheme - less consumption - less transport - less negative impact - can be implemented.

What can be done to be more responsible and more sustainable? Nidumolu *et al.*(2009) introduce a five stage model to increase sustainability. They claim that it is important to find novel ways of delivering and capturing value. In the future, however, the central challenge is to question through the sustainability lens the dominant logic behind business today. This means that the actors must have the knowledge of how renewable and non-renewable resources affect ecosystems and industries. In short, creation of next-practice platforms is needed.

Based on the research work conducted this study some questions arise for future studies. What should or can the actors do if the decisions and activities made by the business actors (e.g. of LSPs) are in contrast with the needs of human beings and the communities they live in? The needs of the people are associated with welfare and happiness. The extent to which, a non-business actor can truly control over harmful decisions made by the business actors, must also be considered. Can the environmental-friendly behaviour of companies really be assessed and determined by local communities? Are there any real and functioning means and methods? Can the people truly influence the strategies of firms if these activities cause environmental hazards? Are there options for influential intervention if there is going to more investments on infrastructure (e.g. seaports/dryports)? Is there any evidence of well-functioning methods of co-makership in creating a better social environment between business and non-business actors? Is the idea of community-based development even valid? Besides external costs, what are the appropriate indicators and methods for quantifying all the effects (positive as well as negative) of business decisions?

It seems that there is still a long way to go, both in theoretical articulation in creating practical policies and in the creation of strategies for implementing responsibility-oriented visions. The task for scientific work is challenging - as already mentioned Cova (1994) claims that reality as an organised structure is a pure illusion, which implies that everything is intertextual, and not causal or predictive. Hence, unpredictable and uncontrollable realities face the actors whether they are scientists or representatives of service providers.

There are things that we need to cope with - a conception of aesthetics can truly contribute to discussion of responsibility. Dostoyevsky, as we have read, had a

prophetical phrase when he wrote that *'beauty will save the World'*. Hence, beauty does not represent the ultimate dimensions of existence, but it actually carriers them. In addition, and as already noted, Dostoyevsky claimed that in the concept fo beauty *all contradictions meet*. In his view, with this concept everything merges into one. Can beauty (and its attributes) be a pertinent starting point for new research orientations in the field of responsibility *inter alia*? Sepänmaa (1986, 118) suggests that the final goal is a world in balance - and its complete understanding. Aesthetics seeks a place in that. This also requires attempts towards a harmony of values and concepts representing the real world.

Earlier, the writer of this study referred to Gummeson (1991, 18) as he addresses the continuing elements of research work by claiming that *'Science is a journey, not a destination*' (Nikkanen 2003). This means that future attempts to analyze responsibility may be characterised as a continuous processes with clear begin but no clear end. Hence, they also challenge the idea of making a straightforward analysis from $\boldsymbol{\alpha}$ to $\boldsymbol{\Omega}$. This remains a valid manifestation for explicating the diversity of responsibility.

Endnotes:

1. An earlier version of the theme of this chapter is presented in Nikkanen (2005)

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