Comparison between Alliances, Networks, and Joint Ventures: What Management Techniques are in place? A Research Note

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This paper surveys literature in the strategy area with a view to investigating the usage of the concept ‘network’. It is obviously used a lot, but not in an analytically very strong way. Being the ‘hybrid’ between markets and hierarchies, the concept ‘network’ can account for almost any relation between firm including formal arrangements such as alliances, joint ventures and supply chains or supply webs. The concept is slippery in the strategy literature. It is a strong concept, though, as it develops an appreciation of relations of cooperation alongside relations of competition between firms, and it casts a broad net out for research to be conducted.

It appears that networks are effectual, but not always in positive ways. Sometimes ties between firms can be too strong and it may be impossible to opt out of relationships, which have been developed over time. The effectiveness of the network for the network partners therefore depends on the ability of the relationship to always develop and move on. This is, paradoxically, a challenge because prima facie, networks could be about long-term non-bureaucratic relations. But this is only effective if development is actually put in place.

Reality is one of these things, which escape us more, the more we are trying to grasp them. Thus the drama of our civilization since Plato is born within the science’s struggle to find an acceptable correspondence of the two parts in the dichotomy “shadows inside the cave” and “real objects outside in the sun”. And while reality is “waiting” out there, we wonder if words can take us that far as Zen: when you put something into words, you kill it; silence is pregnant with truth. Thus when we enter the talking cave of science we are dealing with dead bodies. Following the path of Kant however, we arrive to the conclusion that scientific reasoning gives birth to the reality, that no reality exists before it is discovered by and made an object of a discourse, ergo that material objects doesn’t exist before they are formed into their talking. But are these views in fact as opposite as they seem? Is there a way to study organizational forms such as alliances, networks and joint ventures without “killing” them? And if these organisational forms (continue) do exist, what forms takes their existence, what holds them together and what is their relationship towards the discourse that calls itself “management science”?

The following paper is concerned with the discursive existence of organisational forms such as alliances, joint ventures and networks: how the form that describes them, orders them, classifies
them in the literature (re)shapes the matter and how their reality modifies the form. In order to understand this (dialectical) process we use the lens of different theories exploring the missing link between theory and practice, as Kant names it “the intermediating ability to reason”. The substantial or perceived nature of this link between the talking about these organisational forms and their real object would be essential for the (re)connection of empirical and theoretical realities in the bright light of true knowledge.

The first part of the paper is a descriptive study of the relevant literature on alliances, networks and joint ventures focussing on the meanings that the discourse is attaching to them, their definitions and dimensions such as origin and formation, purpose, legal aspects, knowledge imperatives and knowledge effects. Further, if these meanings indicate different government mechanisms, the second part is concerned with the problematisations of these mechanisms and with the techniques that assemble these organisations. The last part doesn’t construct a new reality, neither does it escape the old one, but proposes a way to access the borderline where the cave meets the outside world.

The Importance of Being Manageable

In the management literature a new mode of organisation – cooperative, interdependent, long-term relations among autonomous business entities is perceived as the most important instrument for value production in the global economy. The discourse of “hyper–competition” (D’Aveni) between individual companies transforms into one of “hyper–cooperation”. As Gomes-Casseres (1996) argues, growing collaboration among firms generates new forms of rivalry: business rivals will often occur between sets of allied firms, which he calls ‘constellations’, rather than between individual firms. Therefore the ability to decide on the “right” form of co-operation with respect to the management purposes in a given environment and to mobilize the “right” partner(s) depends heavily on the knowledge about possible organisational designs and their influence on long–term performance. The ability to manage (partner) portfolios becomes a trump, precisely because built up relationships can produce strong lock–in effects.

The three terms alliance, network, joint venture imply different legal and functional characteristics, but in the discourse they often appear as synonyms. Therefore our analysis starts with the precise understanding of their linguistic meaning. Understanding of purpose, legal regulation and implications for knowledge management, management techniques for resources mobilisation, and give space to flows of power, information and assets build another (hermeneutical) level of definition, something like a superstructure on top of the basic categories.

Definitions

According to Merriam–Webster's Collegiate Dictionary alliance has the function of noun, dates from the 13th century and means: 1 a : the state of being allied: the action of allying b: a bond or connection between families, states, parties, or individuals <a closer alliance between government and industry>; 2: an association to further the common interests of the members; specifically : a confederation of nations by treaty; 3: union by relationship in qualities: Affinity and 4 : a treaty of alliance.
Network has a function of noun and dates from 1560. It means: 1: a fabric or structure of cords or wires that cross at regular intervals and are knotted or secured at the crossings; 2: a system of lines or channels resembling a network, 3: an interconnected or interrelated chain, group, or system <a network of hotels> b: a system of computers, terminals, and databases connected by communications lines, 4 a: a group of radio or television stations linked by wire or radio relay b: a radio or television company that produces programs for broadcast over such a network (Merriam-Webster's Collegiate Dictionary).

Following these definitions, alliance indicates that a limited number of partners have close relationship by affinity, similarity or/and common interests, it suggests that purposiveness and common goals are distinguishing features of alliances. A network connects entities via traffic channels forming a system. In this system of transfer relationships resources flow in the direction they are needed, while alliance suggests a state of joining, closeness and exclusion of others. In the literature these semantic differentiations often change their contextual meaning.

Alliances

“Strategic alliances can be defined as purposive strategic relationships between independent firms that share compatible goals, strive for mutual benefits and acknowledge a high level of mutual dependence” (Mohr and Spekman 1994).

“Alliances are complex organizational forms that are usually viewed as incomplete contracts. They typically involve the transfer of know-how between firms, a process that is fraught with ambiguity”. “(...) Detailed interactions between the alliance partners can rarely be fully prespecified” (Anand&Khanna 2000).

“Strategic Business Alliances (SBA) are qualitatively different from JV and distribution agreements. SBAs are formed by rivalling companies to increase their respective capabilities and competitive positions in non-competing lines of markets. SBAs comprise a wide range of arrangements: multi-purpose JV, limited purpose JV etc.” (Shiva 1997).

“... A firm will form an alliance with another firm in order to bring together specific skills and resources in such ways that may complement each other, without the complications and expenses associated with a merger” (Shiva Ramu 1997).

Alliances are thus characterised as co-operation based on incomplete contracts facilitating the knowledge transfer and (re)combinations of resources.

Joint Ventures

Joint ventures and licensing arrangements are the two most common examples of alliances.

"JVs are (...) simultaneously contractual agreements between two or more organizations and a separate legal (and usually organizational) entity with its own purpose”. (Borys/Jemison 1989). Partners retain organizational sovereignty, maintaining differentiation within the hybrid that may hamper cooperation.

The close interfirm collaboration in JV requires that the JV develops its own corporate identity and institutions. Too close partner involvement intended to control the venture (to help or to restrict its activities) often threatens its ability to accomplish its purpose.
JVs are “combinations of at least two firms into a "distinct" firm with shared equity investments. Profits and losses accrue on the basis of investment" (Shiva Ramu 1997).

"JV can also be conceptualised as a separate business activity, formed and owned by two or more parties (venturers). A JV may have both a separate legal and tax identity, and often a separate management structure. The best of joint ventures are, above all, powerful strategic alliances that have these strategic, structural, and operational characteristics: synergistic, strategic, separate management and organization, tight operating linkages, beyond win–win, reciprocal relationships" (Morris 1998).

"JV is a form of strong cooperation based on technology complementarity, reduction of time span for innovation and market access" (Shiva Ramu 1997).

JVs are a form of co-operation involving the setting up of a legal unit owned by two or more partners. It entails the development of a separate identity, institutions and new competencies.

**Networks**

"Networks encompass a firm’s set of relationships, both horizontal and vertical, with other organizations – be they suppliers, customers, competitors, or other entities – including relationships across industries and countries. These networks are composed of interorganizational ties that are enduring, are of strategic significance for the firms entering them and include strategic alliances, joint ventures, long term buyer–supplier partnerships and a host of similar ties (Gulati/Nohria/Zaheer 2000).

Castells (1996) defines a network as a “set of interconnected nodes”. “A node is the point at which a curve intersects itself. What a node is (...) depends on the kind of concrete networks of which we speak”. The network topology defines the distance between the nodes.

"(...) an economic network is the pattern of relationships among firms and institutions”. "(...) the structure of a network implies principles of coordination that not only enhance the individual capabilities of member firms, but themselves lead to capabilities that are not isolated to any one firm” (Kogut 2000).

Networks are dynamic, involve relational and embedded ties and can be beneficial but also constraining (Doz/Olk/Ring (2000) and also Burt (1992), Ebers (1997), Gulati (1998), Nohria and Eccles (1992), Powell, Kogut and Smith–Doerr (1996)).

"Networks result from the “linking of different units (Tsai 2001) forming an intimate connection versus hierarchical structure”. Networks are “arrangements between markets and hierarchies” (Thorelli 1986). Networks are “relationships of power and trust through which organizations either exchange influence and resources” (Thorelli 1986), or take advantage of economic efficiencies (Jarillo 1988).

"Networks are sometimes viewed as an organizational actor, implying that strategic management of the network yields benefits to be distributed among the network members” (Astley 1984).

„Strategische Netzwerke sind (...) immer Ergebnis von Konstitutionsprozessen, in denen (Fremd-) Organisation und Selbstorganisation zusammenwirken“ (Sydow et al. 1995, S. 19)
Networks are a “set of important relationships extendable in any direction without limits” (Shiva Ramu 1997) and “independent organisations team up with others with complementary skills in order to overcome the complexities of the business environment” (Shiva Ramu 1997).

(Borys/Jemison 1989) define hybrids as organizational arrangements that “use resources and/or governance structures from more than one existing organization”. They are formations “between markets and hierarchies”. Alliances, networks, JV are sub-forms of hybrids.

Comparing the network and transaction cost approach, Johanson/Mattsson (1987) describe the network as system of relationships based on a division of work in the network and thus, on dependency. The network (bargaining) position determines the firm’s access to resources, controlled by other firms. There are also only vague criteria, who is part of the network and no common hierarchical structure of responsibility.

Summing up, linked independent companies build a network, which has no clear boundaries, while alliances and JV are to different extend dependent on common identity building, which creates automatically a more vivid borderline between them and the “outside world”.

From the stated definitions we can conclude first, that the difference between alliance and JV, as well as between network and JV is relatively clear, because of the institutional character of the venture. JVs are a subset of strategic alliances and alliances involves network ties. Despite this intersection and jointness of definitions it is possible to find features that distinguish between the three.

All surveyed definitions describe JV as a legally independent entity, “a child”, created with a purpose from also legally independent “parents”. Joint venture is an established, separate, legal entity and an acknowledged intent by the partners to share in the management of the JV as well as partnership between legally incorporated entities. Each partner holds equity positions.

1 The different forms can also be divided into sub groups e.g.: Alliances can be split according to the number of partners. Alliances can be a) monogamous – a strong lock in and exclusion of the others, constrained alliance choices have significant performance consequences and b) multiple – “real options”: the value of the alliance varies. There are also variations in terms of governance and ownership such as equity alliances (cross shareholding), contract (non-equity) alliances, and acquisitions. Value chain alliances are functional alliances (Shiva Ramu 1997): assembly, procurement, finance, R&D, and marketing. There are also variations on direction: vertical downstream/upstream and horizontal alliances. JVs vary on legal basis (Hewitt&Picot 2000): The contractual JV – does not involve the creation of an independent legal entity and it is suitable when parties are sharing cost or output rather than revenue. Such contractual JVs can be licensing, distribution, and supply agreements (Kogut 1991). Mostly, the research is focussed on equity JVs, which can be also two types: ‘scale’ JVs result from similar moves by all the parents (e.g. vertical integration) and ‘link’ JVs, where the position of the partners is not symmetrical (Kogut 1991). Kogut (1991) explains also under which conditions a ‘scale’ or a ‘link’ JV is likely to emerge. There are also different legal forms for equity JV. In the United Kingdom they can be public limited company (plc), limited company (Ltd.), or unlimited company. In Germany they can be Gesellschaft mit beschränkter Haftung (GmbH), Aktiengesellschaft (AG). They can be marketing JVs – Host/Beneficiary-Relationship, R&D JVs or production JVs.

While alliances vary with emphasis on their purpose, networks vary according to differences in activity links, resource ties and actor bonds (Håkansson/Snehota 1995). The actions accentuate on their function – such as R&D consortia (Doz, Olk, Ring 2000) or in their structure, e.g. alliance network (Baum/Calabrese/Silverman 2000).
The boundary between network and alliance is more fluid. In accordance with the linguistic meaning of the words a few main differences occur: alliance means joining of resources with a specific purpose, and network – grouping of entities around a common function or task. While alliances imply authority, which decides upon inclusion and exclusion, networks suggest an open system of flows and decentralized governance. Alliances are common between large partners (in terms of size and power) while networks are less determined by size. It is the task which is the main anchoring point for the resources flow within a network; therefore network is a more dynamic perspective in terms of resources. On the other hand, alliance has a nuance of static in terms of joining resources not for the sake of free flow, but of pooling, of volume, of centralization. Also the names tend to have different meanings depending on the geographical location of the author. In the Anglo–American literature alliance is often used as a general synonym for network, while European research emphasizes the role of networks. These differences reflect two different concepts of (political/geographical/economical) organization and value creation.

**Formation and Function of Alliances, Networks, JV**

Alliances, networks and JVs have different processes of origin and organisation. According to Kogut (2000) these rules can be technological, but also institutional or social. It is possible to use familial descriptions of alliance companies as “parents” and the JV as a “child”. The social regulations for family ties and reproduction have their analogies in the identity implications of industrial and financial companies. As Podolny/Stuart (1995) show, those companies with similar status level tend to engage in strong ties, while they maintain weak ties with less prestigious firms. Gulati (1995) uses longitudinal multi–industry data to explore how social structure affects patterns of interfirm alliance formation. He observes that “the dynamics between social structure and alliance formation and suggest a dialectic between action and social structure such that each influences the other”.

Hellgren/Stjernberg (1987) suggest that networks “may be set up by inviting potential members according to some formulation of membership criteria”. Networks are therefore “voluntary organizations”. There is “no superior level that may take decisions that are binding for the network as a unit. Therefore the network has a function rather than an objective”.

Kogut (2000) argues that “the emergence of structure in a network is sensitive to specific industry settings” and that cumulative commercial alliance patterns are a predictor of companies’ future commercial alliance patterns (Walker/Kogut/Shan 1994). Further in Kogut (2000): “the emergent properties of networks ride on self-organizing processes that tend to freeze the structure among firms over time into stable patterns of interactions”.

Doz/Olk/Ring (2000) analyse activities and factors that explain the formation of R&D networks: Environmental interdependence, similar interests, triggering entity, seeking domain consensus, open solicitation, continuity of expectation, formal structure, learning and escalation of commitment and satisfaction. They conclude that initial conditions matter for the formation process.

Chung/Singh/Lee (2000) find out that resource complementarity, status similarity and social capital are the driving factors of alliance formation between two specific firms.
For Eisenhardt/Schoonhoven (1996) alliance formation is an effect of both rational business calculus and the social calculus related to the skills, reputation, and past relationships of top executives. The social position of the top manager leads from a strategic point of view to the formation of strategic alliances.

As a result of his study Kogut (1991) develops the “perspective that JVs are created as real options to expand in response to future technological and market developments”. Companies exercise the option (acquire the JV), when there is a growing product market or change in other factors.

For value creating systems (VCS) (Parolini) all kinds of government mechanisms might apply: “the concept of VCS is neutral in terms of the relationship that the various players may establish”. Network is understood as a government mechanism, as a “long term relationship involving various players”, which is neither market, nor hierarchy. Parolini’s work is very much concerned with the notion of “what” is a networked company and the strategic tools it can apply to define itself in the competitive environment: the value net model consists of nodes (activities) and arcs (significant relationships between nodes), instead of structuring around a value chain she proposes a representation of groups of activities facilitating innovation. The analysis is however positioned in a high level of aggregation (even when it talks about the logic of the smallest entities), because of its strategic and normative implications and fails to deliver precise description of how these nodes and arcs are mobilized, stabilized and changed over time.

The discourse on alliance, network and JV formation and governance follows the logic of their definition, mobilizing sociological and economic theories to describe and explain their emergence, development and “death” – patterns, in other words, their “what” and “why” and to deliver normative suggestions. A detailed understanding “how” management techniques in alliances, JV and networks put certain relationships in place, which stabilize over time and have specific effects, is not discussed in the reviewed literature. While JVs originate from a priori specified contractual relationships agreement, networks and alliances emerge from less formalized mechanisms, including establishment of trust, norms and (shared) cognitive representations. One of the preconditions for the formation of an alliance is its purpose, which is crucial in the negotiation process and is usually stated in the contract. Thus, alliances involve explicit decision–making. On the other hand, networks follow incompletely specified (and to a great extend accidental) patterns of interaction along value creation activities, which can stabilize over time. A parallel between norms of individual behaviour and organizational behaviour can be drawn, which allows us to situate interactions and outcomes to generate predictability.

Purpose

The literature emphasizes one important attribute of interactions: their (often unarticulated) purpose. This purpose influences the form as well as the matter of interactions and is therefore essential for our comparative analysis.

According to the literature, alliances are formed around a common purpose, which can be learning (information and knowledge exchange), building of competitive advantage in the market space, access or internalisation of new technologies and know–how beyond firm boundaries, to realize economies of scale and scope or to share risk and uncertainty with the partners (Morris 1998, Shiva Ramu 1997).
Joint Ventures are a legally formalized effect of two companies pursuing a common goal with united complementary strengths, where a new unit is created. The objective of a network is “an aggregate of the objectives of the individual actors” (Hellgren/Stjernberg 1987), while the function of a network is a diffusion of experiences and integration of resources (Hellgren/Stjernberg 1987).

A comparison therefore would lead us to the conclusion, that while a driving force in alliance and JV formation is a clearly outlined common purpose, networks is a function of the different goals of its members, structured by the flows between the nodes. A very sensible resource flowing within a network is knowledge.

The Importance of being Knowledgeable

Since one of the main functions of a company is to create, own and share knowledge, interfirm cooperation is to a great extend based and dependent on knowledge transfer and learning. The only way the existence of knowledge management in alliances, joint ventures and networks can become an object of study is through an analysis of its discursive presence in relations to other objects.

Most studies on knowledge transfer in networks talk about the importance to know the owner of a specific knowledge and to be able to connect to this knowledge through relationships (Powell 1990), emphasizing the informational aspect of deploying external relationships. Kogut (2000) has a different view: how “a network is arising out of generative rules that guide the formation of relationships and code for organizing principles of coordination”. The name and the object “network” develops into an intense knowledge itself and influences to a great extend the single firm’s competitive operating capabilities, generated in a network co-operation. Specialization and variety are complementary qualities of a network, but are antithetical within a firm.

Purpose of knowledge transfer is the commercial utilisation of capabilities, which is reflected in financial performance. In a longitudinal analysis Gulati (1999) found that the proclivity of firms to enter new alliances is influenced by the amount of network resources available to them. Network resources availability is a significant predictor of the frequency with which firms entered new alliances. Here he uses the words alliance and network as close synonyms.

Research on alliance learning shows that similarity between the alliance and company’s markets and products is a prerequisite for great learning benefits (Inkpen 1995).

Mowery/Oxley/Silverman (1996) use a new technique to track effects of alliance activity on interfirm knowledge transfer and the transfer of technology-based capabilities. They find that equity JVs are more effective vehicles for the transfer of complex capabilities into the new organisation than contract–based alliances. The results support the argument that the structure and content of alliances are jointly determined, and that alliances near the ‘hierarchy’ end of the ‘market–hierarchy’ continuum outperform alternatives in supporting interfirm learning. The findings indicate, that experience is an important determinant of the absorptive capacity

Barkema/Shenkar (1997) explore the role of learning in national and international JVs and find that learning via an international JV is closely related to the experiences in domestic JVs and other learning activities.
Through acquisition of core competences JVs often transform the parent company and/or build the path for a new strategic market positioning (Morris 1998). JVs are used for the transfer of organizationally embedded knowledge, which cannot be easily codified (Kogut 1988).

Anand/Khanna (2000) investigate whether firms learn to manage interfirm alliances as experience accumulates and find evidence of large learning effects in managing JV, but none in managing licensing contracts. Learning therefore depends on the underlying complexity of context and is stronger in R&D JV than in other categories of JV.

Gulati/Nohria/Zaheer (2000) discuss the phenomenon “learning races”, in which co-operating companies can be trapped when they try to absorb the knowledge of the partner and exploit it independently. Some researchers have adopted the idea that every dyadic relationship has to be seen as a learning race, in which the absorptive capacity (Cohen/Levinthal 1990) and learning skills are of major advantage. We argue that this problem occurs in alliances more often than in networks and is nonexistent in joint venture per definition. Learning alliances, in which partners agree to share a piece of knowledge relevant for the other, creates the problem of preserving the core competences. In a network, learning races are less prominent, as access to the partners’ knowledge or core–competence only indirectly is the purpose of interconnected companies. Other purposes as sharing of complementary resources, exchange of goods and information (e.g. about competitors) are more important. Joint venture as a separate unity owned equally by the partners owns the knowledge resources under its own management and in order to profit from the joint venture partners have incentives to invest a high amount of know–how.

The difference between alliance and network in terms of knowledge transfer relates to their perception of purpose. In the literature both terms are often used synonymously, because on the first sight they imply identical purposes – cooperation to fulfil a task too complex for a single company. However, the devil is in the detail. Naming a partnership an alliance usually indicates a pooling of (similar) resources (knowledge, finances) in order to increase market power via economies of scope/scale. By ‘networks’ the literature often means relations between complementary resource owners, tied together by personal bonds in order to accomplish a variety of purposes and tasks. Strong or weak ties between small or medium sized companies allow them to use each other’s unique or similar core competences (division of labour) whenever a customer project needs them. Knowledge or rather information can be said to be the effect of network ties while in alliance knowledge is usually located in either party.

Alliance as a cooperation between legally independent entities often creates a moral hazard problem. Therefore, if the goal is pooling knowledge, the management of which is difficult to specify, a joint venture offers an acceptable alternative. Considering alliances, complications of other kind must be taken into account: if partners of two different legislation or cultural backgrounds ally, communication and coordination problems may arise due to information asymmetry. Joint venture offers a plausible solution if partnering companies plan to cooperate on one of their core businesses, while in others they may differ significantly and pursue separate goals. While networks remain more open to new participating companies due to the weaker ties at the formation, alliances produce strong lock–in of resources, which are costly to separate.
The research on learning in alliances has a multidimensionality, which encompasses all aspects of the process of knowledge creation, transfer and utilization. Knowledge plays a central role in the formation of alliances, networks or JVs and is often their main purpose. It is an imperative. The three forms produce different relations of and to knowledge. Alliances are often initiated with the aim of learning skills and competencies from partner companies, which is why learning races figure more prominently in alliances. Creating structures and hierarchy affects positively the ability of an alliance to transfer knowledge. Networks exist because of flows between nodes; the result is specialisation of the individual company. Management in networks is thus about control and reflection about network position and specialisation as well as monitoring of financial, informational and resource flows. More common are relations that are based on the exchange of goods, whereby access to resources, and not knowledge, is paramount. JVs are founded in order to exploit specific market or technological possibilities that are dependent on competences located in partnering firms, and the management imperative revolves around the need to transfer tacit and explicit knowledge from parent companies.

**Management of Knowledge**

There are few studies on knowledge management in alliances, networks and JVs and it is the discourse produced by these studies that we will turn to in the following section.

*Kale/Singh/Perlmutter (2000)* examine the role of relational capital between alliance partners as a means of both enhancing cooperative behaviour and mitigating competitive conflicts. On the basis of large empirical data they show that relational capital based on mutual trust and interaction at the individual level between alliance partners creates a basis for learning and know-how transfer across the exchange interfaces.

Variances of alliance structure influence the ability to assimilate and implement knowledge. Findings indicate that non-equity alliances are more effective for discovering knowledge than equity. Equity forms stress issues of control, while non-equity alliances promote the development of common language and information exchange of knowledge. Research work suggests that for knowledge–rich alliances companies favour non-equity forms because of their flexibility even if they offer fewer legal protections (*Hagedoorn/Narula 1996*).

Joint ventures as a separate business unit pool resources of both allies, exercise ownership rights over them and decide upon management direction. Both parties share the revenues through their equity ownership, which is normally 50:50. Therefore a joint venture arrangement in its different legal forms offers the best way to legalize ownership on newly created knowledge. It is a solution for free rider problems as well as for learning races (*Inkpen 1995*).

A model of learning and performance for international JV propose and test *Lane/Salk/Lyles (2001)*. Building on the *Cohen/Levinthal (1990)* they segment absorptive capacity into 1. Trust influences the ability of JV to understand new knowledge from foreign parents, 2. Learning structures and processes of the JV, and 3. JV’s strategy and training competences. These three components support the knowledge assimilation and its commercial application. The empirical results show that management support and trust influence performance but not learning.
Doz (1996) examines how learning that takes place in strategic alliances between firms mediates between the initial conditions and the outcomes of these alliances. He discovered that successful alliance projects were highly evolutionary and went through a sequence of interactive cycles of learning, re-evaluation and re-adjustment.

The research reviewed in this section is general in nature and carried out on an aggregate level. The studies state that alliance management revolves around the creation of relational or social capital in the form of trust and that management should support partnering activities. JVs are here a government mechanism where knowledge-rich alliances benefit from the legalisation of knowledge ownership, as well as it prevents free-rider problems. The literature does not tell us how trust is generated. Is it an outcome or a precondition of interaction?

The Literature review is summarised below:

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<th></th>
<th>Network</th>
<th>Alliances</th>
<th>Joint Ventures</th>
</tr>
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<tbody>
<tr>
<td>Definition</td>
<td>Connection between 3 or more persons, companies or things</td>
<td>An exclusive partnership</td>
<td>A company owned by two or more independent companies</td>
</tr>
<tr>
<td>Purpose</td>
<td>Each node or company have an individual purpose</td>
<td>Partnering firms have to some extent a common purpose</td>
<td>The JV has a purpose; strategies of parent firms might diverge.</td>
</tr>
<tr>
<td>Boundaries</td>
<td>Networks are open</td>
<td>Defined by partnering firms</td>
<td>Clear, legal boundaries</td>
</tr>
<tr>
<td>Relation to knowledge</td>
<td>Information and resources flow through ties. Knowledge is an effect</td>
<td>Alliances are formed in to order to learn from the partner. Knowledge is located in partners</td>
<td>Are formed to capitalise on knowledge in parent firms and to generate knowledge</td>
</tr>
<tr>
<td>Management imperative</td>
<td>Find suitable partners and build trust</td>
<td>Avoid learning races, build trust</td>
<td>Construct contracts, build trust</td>
</tr>
<tr>
<td>Management technologies?</td>
<td>In principle None</td>
<td>Incomplete contracts, Dependent on relationship</td>
<td>Equity ownership</td>
</tr>
</tbody>
</table>

In conclusion, the texts reviewed are typically based on large-scale surveys, thus little knowledge exists as to HOW alliances, networks and JVs are managed in the lived reality. In the literature, management is usually compressed in general prescriptions such as building up of social capital in the form of trust, ownership arrangements and experience with partnering. A few studies have tried to explicate the government mechanisms of partnering behaviour. It is these studies that we will turn to in the next section.
In search of theory of regulation of networks, alliances & JVs

A few authors have shown the way forward in the search for a theory of regulation of interfirm co-operation. An important study by Kreiner & Schultz (1993) discusses how informal collaboration takes place in the biotechnology sector. The study examined 16 successful „informal university–industry research relations“, focusing on the personalised nature of R&D collaboration. The study uncovers how norms of reciprocity and liberally sharing of information governed the personal relationships. An economy of unauthorised sharing of information, giving favours and exchanges of materials, test etc. resided in the biotech sector:

“The Barter Economy is the label we have chosen for a pattern of interaction whereby minor favours and services are exchanged within the biotech sector. Organic material….specialised knowledge and experiences are widely „traded“. Without being openly negotiated and publicly discussed, such unofficial trading appears to be systematic recurrent and implicitly condoned” (Kreiner & Schultz, 1993)

The account shows that even though management might not be implicated in the management of external collaboration, relationships are regulated. Indeed the “fluidity of flows” or the “the strength of ties” within the network are conditioned by the adherence to the criteria’s of the "barter economy.

Furthermore the regulatory mechanisms also define the boundaries of the network. Norms of trust and the barter economy determines who is in and who is out:

“If asked, they would operationalise trust to mean that entrusted knowledge would not be misused, stolen or leaked to third parties. Anybody being accused of such an act would rapidly become a leper in the field. Illegitimate use of shared information was considered the deadly sin of networking, and the sanction against such a sinner would be to close his window on the „frontier“ in the future” (Kreiner & Schultz, 1993)

Networks are then not only regulated they have also got boundaries, where membership is determined by adherence to network norms.

Another study by Dyer/Nobeoka (2000) offers empirical evidence for the significance of management or regulation of networks. In the case of Toyota the regulation is guided by management, which seeks to create ‘identity’ for the network as well as infrastructure to support the knowledge transfer among suppliers. In Toyota regulation revolves around three main obstacles or management imperatives: motivation for participation, free riding effect and reduction of cost associated with transfer of explicit and tacit knowledge.

The mechanisms in place in Toyota are:

- The creation of common identity and purpose (all members are part of the Toyota Group).
- Dividing the network into smaller groups of suppliers with similar skill levels, i.e. structuring the network via a knowledge criterion.
- Creating rules and norms for sharing knowledge and efficiency gains: network companies keep profits from productivity gains in the short run. The norms also involve interfirm employee transfer in the network. (Dyer & Nobeoka 2000)
The Toyota study thus shows how the general necessity for construction of trust and knowledge transfer has to be translated into criteria and governing rules for e.g. sharing of profits, so that the proposed network effects can become a piece of reality. Thus trust and knowledge sharing are not means for the creation of network effects; they themselves are purpose and effect, while other criteria and mechanisms are called for to produce them.

Here, all the way through the literature review, the contours of interfirm cooperation were drawn, in order to understand how knowledge of the real objects is possible. Still, collecting pieces of the puzzle, there is no one single unifying discourse, but many different languages to talk about alliances, networks and JV as well as multiple perspectives. How can we be sure in the dialectic relatedness between talking and empirics and that the object we are talking about is real enough to be classified as an ontological entity? Is it sure that after all those descriptions and classifications, omissions and accumulations, generalizations and differentiations we have grasped a piece of reality which can be built upon in the closest future? Or like this painter in the story from Hesse, every time the picture is ready the painted image on the canvas does not correspond to the living face, because both have changed processing from the beginning to the end? Is it possible with what we know now to answer the question what holds alliances, networks and JV together, how they mobilize resources and what makes their existence possible?

**Conclusion and Discussion**

Purpose of this paper was to outline the different use of the terms alliance, network and JV that appear in the literature concerning their formation, purpose, variations, implications for knowledge management and performance. In order to answer the question of management mechanisms, it was important to find out, whether there are concrete descriptions on "how" management techniques "work" to keep in place a specific kind of relationships. Networks emerge through relationships of independent nodes, which are kept together by a common function and allow free resource flow, blurring of the company’s boundaries and flexible grouping of activities. Alliances mean “pooling of resources” between few partners (increasing mass), strong lock-in and exclusiveness. In the literature review it was not clear however what the precise differences between them are as they are often used synonymously. There is not enough understanding of the management mechanisms in the three interorganisational forms and precisely how the mobilized resources are kept together in order to produce certain effects. This point of differentiation – in a management techniques perspective – is an important missing link in the research literature on management. Also, there is a geographic logic in the interpretation of the three terms: in European literature networks are used more commonly to describe interfirm relations, while in Anglo-American sources alliance seem to be the more important form of cooperation. Joint ventures are often seen as a “child” of an alliance, because they appear as a third entity, a single institution with its own goals and management culture. The three forms of cooperation are supposed to translate different forms of resources (knowledge, infrastructure) into marketable products. Through their ability to mobilize resources in different parts of the system they influence the firm’s performance significantly.
If interfirm cooperation is to be made manageable, there is a need to understand the mechanisms behind each organisational form. In alliances, networks and JV, resources are mobilized differently; this mobilization serves different purpose and is initiated and accomplished by different parts of the structure and by different means to produce different (intended or unintended) effects in different industry or market environments. From the "big picture" of visible grand theories about structure and government, the analysis has to go deeper in the management of (power and knowledge) relationships between elements constituting different modes of value production.

There are three perspectives to answer this question: of mechanics, of economical modelling and of sociological ontology. The mechanical perspective will lead us to Hobbes and the understanding of the world as consisting of mechanical powers, power equilibrium, mechanical interactions, resistances, interactions in the body of Leviathan. From this perspective the relations that keep these three organisational forms together will be based on principles of simple geometry, on "the matter in motion". While the modelling perspective says that ideal types can be created (Smith, Kant, Hegel, Weber etc.), based on the formula "ceteris paribus", we could make normative suggestions on management. The sociological ontology would ask the question: is it possible to know in reality these organisational forms and their management? And what is the gap between naming and real object? The organisational forms and their management are not a given reality; they do not have an evident existence before they become an object of a human knowledge-ability, they are principally constituted by the activity of scientific reasoning. If we take this path (from Kant) we are leaving the level of "how relationships are held in place" to reach the level of "are we able to know that these relationships really exist" and "what is the point of their reference?" Do alliances, networks, joint ventures, which are analysed in the literature, really exist in the form they are described, classified and ordered? Or is there a missing link between theory and practice, which Kant names the "intermediating ability to reason"? What IS this intermediating link between the talking about these forms of organisation and their real object? How can we explore the gap between our naming and their real characteristics? How can we connect the empirical data with theoretical constructs? Should we leave it to this "subjective ability to reason" – the individual skill of every scientist or manager? The problem is much more complex than we thought at the beginning, when we started the work on outlining the differences. There are not only different definitions, but also different perspectives to look at the definitions; there is a difference between definitions and their real object and there are differences between empirical objects and between the perspectives to look at them. It is important to solve this problem therefore, because these organisational forms are coupled with different financial and management effects and its resolving could help us to understand also other related phenomena. The point is that we cannot possible know how exactly these relationships of power and knowledge are put into place and how they are exercised unless we possess adequate instruments for reasoning. In order to deliver normative value for management, further development of our theoretical instruments is necessary, which would be able to grasp the dimensions of the research question.

One possible intermediating link would be the so-called Actor–Network–Theory. The main ontological problem is to understand how an actor appears to mobilize and represent (huge) amount of human and non-human resources, to define roles for them in a discourse and to grow
stronger doing this. This means that the world is seen as a multiplicity, as a multidimensionality; that the macro–micro–dyad is resolved to the question how can men act like one man? Different solution than the social contract, proposed by Hobbes, develop Callon and Latour: the phenomenon of translation. In our example networks, alliances and joint ventures can be seen as multiple effects of one translation process: the mode of an organisational form emerges from negotiations, struggles and what holds it together are the (durable) materials into which these relations are inscribed. In this way what matters is the “variation in relative stability and durability of different sorts of materials”. As an effect of negotiations technical or social relationships can be put into “black boxes”, in order not to have to “negotiate with equal intensity everything”. Here we can say that interfir relationships in alliances, networks and JV emerge and stabilize in different translation processes. In JV elements are hold together via strong form of written and institutional inscription, where discourse of action, meaning and purpose is created. Networks rely on different mode of inscription: the discourse binds the independent social and technical entities by relationships of trust, common culture, interdependence, and complementarity; the network grows through the process of translation of different entities oriented towards the realization of a task. The alliance mobilizes and relates similar kind of resources in order to fulfil a common purpose, which is often glue that sticks entities together and can develop over time, going out of control of the actors, who initiated the cooperation. So the alliance becomes something alive, attracting additional resources and increasing the stability of its inscriptions (in the best case). This cooperation and its purpose are often expressed in a mix of immaterial and material inscriptions. A discourse of knowledge is created which puts in place relationships of power and authorises the new actor to “speak” the relations of truth and right, to prescribe roles and to act. How this discourse emerges (Foucault) is another issue, which will not be discussed here.

Concerning the management of these three organizational forms: it is in his/her subjective ability to reason, which objects will be translated and what kind of relationships will be developed, the choice of discourse and of elements he/she needs and the kind of inscriptions suitable for this discourse.

References and Additional Literature


2 Latour (1999) also talks about alliances. Under alliances he understands “groups that previously wouldn’t give each other the time of the day” that may be involved in the discourse; the connection between new non-humans and new humans.


