

AMBIGUITY IN INTERNATIONAL INTER-UNIVERSITY NETWORKS¹

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1 Introduction: the search for theoretical concepts

Theoretical work on international inter-university networks (IIN's) is scarce. Research into the field of higher education itself has been dependent on theoretical frameworks from other disciplines, which then need to be adapted to the specific characteristics of higher education. In our search for starting-points for theory development we therefore need to relate to theoretical notions from previous work in other disciplines. Previous work on change in higher education does not provide us with solid points of departure for theorising IIN's. The studies in the internationalisation of higher education or international co-operation in this field do not offer profound theories for the organisational aspects of these collaborative arrangements. Other work in the field of change in higher education often take either (national) policies as a point of reference or internal dynamics in the university. Theories on inter-university networks however need to start from the notion that change neither comes from 'above' nor does it emerge solely within the organisational context of a particular university. The strategies and projects for co-operation in IIN's are both formulated and implemented in an interactive context. Fundamentals on co-operation in other fields within the public realm – e.g. co-operation between hospitals or schools – do provide us with insights on inter-organisational arrangements, but, because they take place within the national domain, they do not pay attention to the inter-national component of IIN's. Useful starting points, in which both the inter-active and the inter-national component are addressed, are offered by organisational theories and the management literature on inter-organisational processes in international alliances. Although theoretical development in this area is still in a nascent state of development (see Adler, 1983; Parkhe, 1993a), the research in this field has brought forth a wide range of studies (for an overview, see Auster, 1994). We claim that these studies provide the best point of departure for our analysis. The research in international strategic alliances, networks and joint ventures offer basic concepts, which can also be applied to inter-university networks. Naturally, the precise elaboration of these basic principles needs to be 'translated' to the specific context of the university.

Strategic alliances have been defined in many ways and by many authors (for an overview see Douma, 1997). We have already (see Beerkens, forthcoming) placed strategic alliances on the continuous scale between free market on the one hand and total amalgamation on the other (Lorange and Roos 1993). Within this broad definition, various specifications have emerged. By and large however, strategic alliances are commonly viewed not as a singular form of organisation but as a collection of possible hybrid arrangements with a strategic nature (e.g. joint ventures, R&D consortia, marketing partnerships etc.). An inclusive definition of international strategic alliances is given by Parkhe:

¹ This paper constitutes the theoretical framework of a study in the effectiveness of collaboration in international inter-university networks.

“global strategic alliances are relatively enduring inter-firm cooperative arrangements, involving cross-border flows and linkages that utilise resources and/or governance structures from autonomous organisations headquartered in two or more countries, for the joint accomplishment of individual goals linked to the corporate mission of each sponsoring firm” (1991: 581).

This definition is in line with our typology (Beerrens, forthcoming) since it emphasises its long-term nature, the international aspect and the preservation of autonomy of the participating universities. A distinctive feature of the international inter-university networks that are the subject of this study is that they are strategic alliances involving a wide variety of cross-border flows and linkages. This is inherent to the fact that universities can be seen as ‘loosely coupled systems’ (Weick, 1976) with a high level of fragmentation in authority and in work specialisation. The networks under investigation in this study are comprehensive networks, which means that the co-operation between the participating universities is fragmented in several links between faculties, schools and offices. The arrangements thus consist of a bundle or portfolio of projects, which preferably contribute to the overarching strategy of the network.

In the remaining sections of this paper we will map out the basic concepts and theoretical notions from the management and organisational literature and explore the implications of the basic concepts for our study subject, international inter-university networks. In the first section, we will introduce the main problem addressed in this paper: the tension between complementarity and compatibility in inter-organisational arrangements. The theoretical notions behind these concepts and their implications for our perspective on universities and inter-university collaboration will be addressed in the subsequent two sections. In section 5 we will present directions for networks to manage the paradox of diversity in IIN’s. On the basis of the findings of this paper we will present a model for managing diversity in IIN’s in the final section. This model serves as an analytical framework for examination of the four international networks.

2 The paradox

An interesting paradox is that alliances or networks are based on both compatibility as well as complementarity. Research indicates that resource complementarity is crucial to collaborative success (Harrigan 1985; Bleeke & Ernst 1991). Johnson et al. (1996) indicate that resource complementarity involves both uniqueness and symmetry. Complementarity determines the mix of unique and valuable resources available to achieve objectives (Killing 1983), thus enhancing competitive viability of the network. On the other hand, complementarity implies strategic symmetry, wherein a balanced share of unique strengths creates partner interdependence (Harrigan 1985). Compatibility refers to the congruence in cultures and capabilities between alliance partners. There appears theoretical and empirical support behind the idea that organisational compatibility in various domains has a positive effect on alliance performance (see Sarkar et al., 2001).

In examining determinants of alliance performance, we focus on a unique aspect associated with the characteristics of partners involved in an alliance, namely inter-organisational diversity

(Parkhe 1991). We suggest that performance is likely to be enhanced when organisations are able to manage the paradox involved in choosing a partner that is different, yet similar. Successful networks thus require partners who process similar characteristics on certain dimensions and dissimilar characteristics on other dimensions. However, insufficient information about possible partners or inadequate attention to partner selection will lead to unstable networks that do not fall within this ideal-type. This does not mean that only partners with a perfect match can be sustainable in the long run. If this were the case, inter-organisational co-operation would be very likely to fail. The essence of this study is that the networks need to manage this diversity, which on the one hand can lead to incompatibility but on the other hand, is often a source of complementarity and thus one of the basic reasons why universities co-operate. Both complementarity and compatibility are seen as prerequisites for sustainable co-operation. Without complementarity, co-operation would be useless or merely symbolic because the participating organisations have nothing to offer that is beneficial to the other partners. But even when a sufficient level of complementarity is apparent, the relation between the participants needs to evolve in such a way that interaction is possible and is not completely disabled through the differences in goals, practices, cultures etc. of the individual organisations. In a situation where complementarity and/or compatibility is insufficient, the network has to intervene in order to re-establish a balance. To emphasise the paradoxical relation, we choose to use the terminology of type I and type II diversity (Parkhe, 1991: 580). Type I diversity includes the inter-organisational differences that the alliance is meant to exploit. These form the underlying motivations for establishing or entering into the network and deal with the reciprocal strengths and complementary resources furnished by the network partners. This type of diversity actually facilitates the formulation, development and collaborative effectiveness of IIN's. Type II diversity, refers to the differences in partner characteristics that often negatively affect the sustainability and effective functioning of IIN's (see figure 1). Parkhe (1991) also states that these types are not static but dynamic and that they are differentially impacted by the processes of organisational learning and adaptation. The level of complementarity changes in time because capabilities or knowledge that originally existed in only one of the partner universities can eventually become internalised by another. The network should therefore continually evaluate the level of complementarity and renegotiate interdependencies in the course of time. The network can also actively intervene in those cases where incompatibility exists, by applying mechanisms to reduce the negative impact of incompatibility. The network thus needs to adapt to changing circumstances. Ultimately, the network would want to end up in a situation where there are ample opportunities for co-operation and the process of co-operation is not substantially hindered by the differences among the partners. The performance of the network as a whole is dependent on the way the network manages this paradox, embodied by the balancing of the 'hard' aspects (complementarity) and the 'soft' aspects (compatibility) of cooperation. We will address this issue in the rest of this paper.

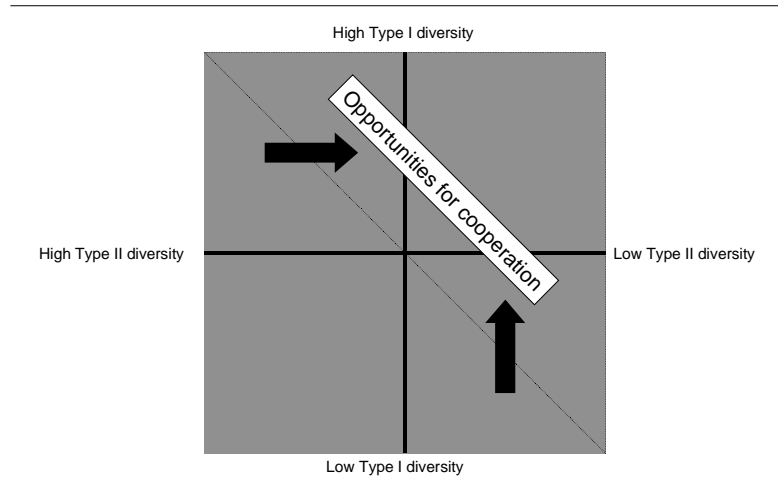


Figure 1: The diversity-paradox

3 Type I diversity: complementarity

Theoretical antecedents of resource complementarity in strategic alliances

Resource complementarity, or the extent to which each partner brings in unique strengths and resources of value to the collaboration (Johnson et al., 1996) is crucial for success of collaborative ventures (Harrigan, 1985). Harrigan (1988: 206) notes that significant asymmetries among parent organisations are expected to be stabilising to a venturing relationship because partners each need what the other can supply. This perspective on collaborative arrangements finds its theoretical roots in the resource based view (RBV) of organisations. In the RBV (Wernerfelt, 1984; Barney, 1991), organisations are seen as a bundle of resources. The RBV introduced an alternative perspective for the prevailing models of strategic management in the 1980's, where emphasis was placed on analysing a firm's opportunities and threats in the competitive environment (Caves and Porter, 1977; Porter, 1980, 1985). This perspective implicitly adopted two assumptions (Barney, 1991). First that firms within an industry are identical in terms of the strategically relevant resources they control and the strategies they pursue (Porter, 1981, Rumelt, 1984, Scherer, 1980). The second assumption is that, should resource heterogeneity develop in an industry or group (e.g. through entry of new providers), this heterogeneity will be very short lived, because the resources that firms use to implement their strategies are highly mobile. These assumptions effectively eliminate firm resource heterogeneity and immobility as possible sources of competitive advantage. According to Barney (1991), the RBV substitutes these for two alternative assumptions. First the RBV assumes that firms within an industry may be heterogeneous with respect to the strategic resources they control. Second, the perspective assumes that these resources may not be perfectly mobile across firms, and thus heterogeneity can be long lasting. The RBV thus suggests that a degree of heterogeneity tends to be sustained over time (Peteraf, 1993). Some resource characteristics that prevent firms from moving toward resource homogeneity have been identified as: imperfect mobility, imperfect imitability, and imperfect

substitutability (Barney, 1991; Chi, 1994). Imperfect mobility, imperfect imitability, and imperfect substitutability of firm resources are not only essential for sustained resource heterogeneity, but are also instrumental in the formation of strategic alliances (Das and Teng, 2000). The argument made is that the more imperfect the mobility, imitability, and substitutability of a university's resources are, the more likely that others will be interested in forming alliances with this university..

Eisenhardt and Schoonhoven (1996: 137) see alliances as “cooperative relationships driven by a logic of strategic resource needs and social resource opportunities”. Van de Ven (1976) also notes that the process of building inter-organisational relationships can be studied as a flow of resources among organisations. Wernerfelt (1984), in his introductory article of the resource based perspective on organisations, refers to mergers and acquisitions as providing opportunities to trade resources or bundles of resources. Resources can be strengths or assets of the organisation that may be tangible, like financial assets or technology, or intangible, like reputation, legitimacy or managerial skills. In essence, strategic alliances are about accessing and providing resources that a particular organisation does not already possess, but which are critical for improving its competitive position. A key motive for entering alliances is to combine the resources of the partners (Devlin & Bleackley, 1988). Strategic alliances have become an attractive alternative to mergers and acquisitions as a means to acquire resources, precisely because alliances usually are faster and cheaper ways for accessing resources (Lei, 1993). The resource-based view suggests that the rationale for alliances is the value-creation potential of firm resources that are pooled together (Das and Teng, 2000). Reciprocal strengths and complementary resources, or a 'fit' between partners are identified as a premise for successful alliances (Parkhe, 1991). A key implication of the RBV is that organisations will search for partners that will bring about some sort of fit or synergy between their resources and those of their targeted partner. Summarising, the RBV considers strategic alliances and mergers/acquisitions as strategies that are applied to access other firms' resources, for the purpose of garnering otherwise unavailable competitive advantages and values to the firm. These resource complementarities can be used to develop new competitive advantages (March, 1991). Alliances that have the potential to create synergy by integrating complementary resources have the highest probability of producing value (Madhok and Tallman, 1998), and therefore resource complementarities (should) represent one of the most important criteria to select strategic alliance partners (Hitt et al., 2000).

A Resource Based View of the University

The RBV has proven to be a helpful perspective for the study of firm's strategic behaviour (Barney et al., 2001). The subject of this study raises the question of whether it can also be applied to universities. We argue that it does. On the one hand, the resource identified in the RBV can also be found in the resource base of the university. On the other hand, changes in the current environment can clearly be related to the changes in the resource positioning of the contemporary university. Jessop (1999) illustrates this by claiming that:

“even domains or activities that remain primarily non-commercial in their orientation (due, for example, to social or political reasons) can still be distorted through the imposition of a

secondary economic coding. This occurs in so far as choices among formally non-commercial activities are influenced by 'profit-and-loss' or at least economic 'cost-benefit' calculations. This is reflected in Polanyi's argument that the novelty of nineteenth century civilization lay in its tendency to judge all social events from the economic viewpoint (1944: 33-34). This tendency is reflected today in neo-liberal encouragement to educational, health, scientific, and other decision-makers to consider the financial impact of their activities on the individual, organizational, and institutional levels. This is reflected in careerism and the subversion of professional integrity; in the growing role of market proxies in non-commercial organizations; and in the subordination of a wide range of non-commercial institutions to the (perceived or discursively constructed) imperatives of a strong and healthy (internationally competitive) economy."

Conceptualising universities as being in a competitive environment with other institutions can thus be considered appropriate given current realities. Institutions of higher education have to compete for reduced financial resources or for top quality students and reputable staff. Competition emerged nationally but increasingly this contest is extending to the international level (----, ----). Furthermore, a culture of competition has also emerged attributable to rankings in various magazines. Finally, universities are confronting competition from new entrants to the higher education industry. Thus, while academe may abstain from characterising itself as being part of a market or in competition in ways characteristic of for-profit organisation, the reality – or at least the perceived reality - is that the environment has become increasingly competitive.

Following Barney (1991), the resource-based view of the university can best be started by looking at the type of resources and the way resources contribute to sustained competitive advantage. University resources include all assets, capabilities, organisational processes, attributes, information, knowledge etc. controlled by the university that enables it to implement strategies that improve its efficiency and effectiveness. These resources can be classified into three separate groups: physical capital resources, human capital resources and organisational capital resources. Physical capital resources include the technology used (e.g. the universities ICT network, its digital learning environments), its teaching and research facilities, its laboratories, its real estate and its geographical location. Human capital resources refer to training, experience, relationships of managers and the knowledge- and professional networks of academics. The organisational capital resources can be the university's formal operating structures, planning structures, budgeting systems, quality assurance systems, but also its relations with industry, government and other parties in its environment. All these resources can, but not necessarily do, contribute to the competitive advantage of the university. Competitive advantage exists when the university is implementing a value creating strategy not simultaneously being implemented by any current or potential competitor. When other organisations are unable to duplicate the benefits of this strategy, one can talk of sustainable competitive advantage (Barney, 1991: 102). If we remember the two assumptions of the RBV – heterogeneity of resources and the imperfect mobility of these resources – and relate them to the notion of competitive advantage, we can illustrate why this perspective has become more useful in describing the contemporary higher education environment. Sustainable competitive advantage can only be accomplished if the university obtains those resources that are not available to others and which are imperfectly mobile. Barney (1991: 105-106) argues that, to have this potential, these university resources must have four

attributes: they must be valuable, rare, imperfectly imitable and there must be a lack of strategically equivalent substitutes. Das and Teng (2000: 41) argue if organisations possess more imperfectly mobile, imperfectly imitable and imperfectly substitutable resources, it is more likely to engage in inter-organisational arrangements (Figure 2).

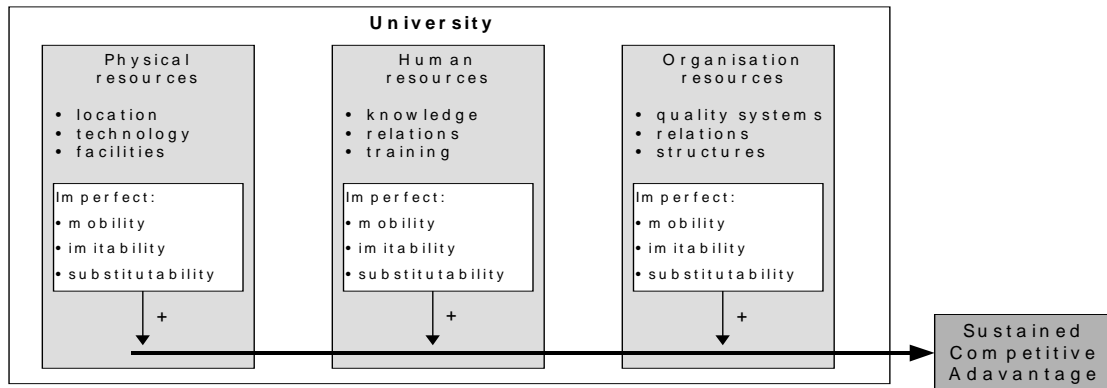


Figure 2: A resource-based view of the university

In the international context of higher education, some attributes of the university can be considered resources and thus become possible sources of competitive advantage. The most obvious are the geographical location of a university, or the native language related to this location. It appears that universities in the Anglo-Saxon world have exploited this advantage to recruit international students. Many non-English speaking countries nowadays try to imitate this source of competitive advantage by providing courses in English. At the same time however, national governments value their linguistic heritage and therefore limit the use of English in universities. Many sources of competitive advantage are more directly related to the university. These might consist of the possession of high-grade equipment or facilities, advanced knowledge in the field of educational technologies, relations with industry, enjoyable accommodation, effective management or budgetary systems, etc. Sources of competitive advances can also be related to methods or content of teaching and research. High quality and respected research can be one of the most important sources of competitive advantage. A specific teaching method (e.g. the case-study method in Harvard Business School) can give a school a high reputation. A specific stream of research might do the same for research institutes (e.g. the Aston-studies in the field of organisational theory). Prestigious academics and the knowledge and personnel networks they bring along are also very important since they are immobile, inimitable, rare and valuable. Obviously many of these resources have always been important to universities. Many however, have become a source of competitive advantage due to the processes of globalisation and internationalisation in higher education. Especially those resources that relate to the national level (e.g. location, language, culture), have become important due to the growing importance of international staff and student recruitment. Furthermore, resources (like the university's reputation) can be exploited more effectively due to the increasing mobility of students and staff.

The process of globalisation has affected the resource base of the university – which is its source of competitive advantage – in different ways. First, resources that in the past did not

constitute a source of competitive advantage have become such a source due to increasing flows of students (e.g. language and culture). Second, resources that used to be a source of competitive advantage in the national domain have – to some extent - lost importance in the global context (e.g. access to government officials or research funding agencies, relations with domestic industries, national reputation). Third, students, and future employers, attach other values to the existing resources within the university. In the interests of their future careers, students attach more value to international and multicultural oriented programmes (e.g. international business studies, European studies) or to opportunities for student exchange. The increasing emphasis on the international orientation in institutional strategies illustrates the university's response to these changing demands. Also, universities operating within the national domain, which in many countries used to be characterised by high entry barriers for newcomers, did not have a stimulus for creating competitive advantage. Universities were often rather identical in their resource base, which predominantly was provided by government. The decreasing resource dependency on governments and the entry of new international competitors (which consequentially have a different resource-base) in the form of foreign or corporate universities have forced universities to retain or regain their positions in their environment through changing their resource base. The contemporary university thus goes through significant changes in the composition and appraisal of its resource base due to processes in its environment. This makes the assumption of heterogeneity of resources valid for the contemporary higher education environment. To retain a viable position, the university has to constantly optimise its resource base and adapt it to its objectives.

Complementarity of resources in inter-university collaboration

The resource base of universities will obviously not always be optimal. In order to gain access to important sources of competitive advantage, universities can try to buy or internalise these resources (e.g. through the market or through acquisition). Universities, unlike multinational firms, however are still mainly national institutions operating in a governmentally regulated environment, and therefore acquisition is usually not feasible. Attaining resources through the market might fail due to national regulations or due to the fact that the physical, human or organisational resources are simply not mobile and can not be transferred from one (national, cultural or organisational) context to the other. Developing the resources in ones own university might be impossible because of inimitability. The university can decide to do without, but if it is seen as a vitale resource and if it's imperfectly substitutable, this would give the university a relative disadvantage. What universities can do in such situations where the required resources are vital, imperfectly mobile, imperfectly imitable and where substitutes are not available, they can attempt to get into a relationship with other universities that do possess these required resources *and* can benefit from resources possessed by the university in need. The benefit of this inter-organisational arrangement is the access to previously unavailable resources, and the joint development of new resources through synergy created by the complementarity of knowledge and resources. To develop and exploit a competitive advantage, universities must possess resources that can be used to create inimitable and rare value for its students and other customers (Ireland et al., 2002). The increasing complexity of markets, because of accelerating and rapid

globalisation, makes it difficult for firms and universities to have all of the resources necessary to compete effectively in many markets (Ariño & de la Torre, 1998). This access to complementary resources is seen as the most important motivation for organisations to establish collaborative arrangements (Glaister and Buckley, 2000). Franchising for example, has become a common way of exchanging valuable and inimitable resources with one university gaining access to markets, facilities and local expertise while the other gains access to high quality educational programmes (and often reputation).

International inter-university networks are another example of such exchanges, albeit more complex due to the multilateral and comprehensive nature. Bilateral exchange agreements are rather easy to lay down in contractual obligations and consequently, universities know what contribution they are expected to render to the arrangement. Exchange on various disciplines and themes, through multiple partners or not based on precisely defined contracts but on a mutually agreed upon long-term strategy. Resources and attributes that do not qualify for exchange on first sight, may become transferable in these comprehensive arrangements. This makes the choice for partners in IIN's a hard one, since the various contributions that the different partners render to the network are difficult to compare. IIN's are thus far more based on voluntary contributions and cannot be assessed on a one-on-one basis since a contribution of a particular university on a particular activity can be reimbursed or compensated by another university's contribution in other activities. Exchange obligations are thus far less clear cut than in contractual arrangements, which make social aspects like trust, opportunism and forbearance important in the co-operation process (Axelrod, 1984; Oye, 1986; Parkhe, 1993a,b). These factors in turn are dependent on the compatibility between the partners.

4 Type II diversity: compatibility

Theoretical antecedents of compatibility in strategic alliances

The argument that more compatible partners will be more successful in collaboration is related to Evans' (1963) 'similarity hypotheses': the more similar the parties, the more likely a favourable outcome. The homogenisation or convergence thesis, often postulated in the study of globalisation (Bell, 1973; Williamson, 1996; Meyer et al., 1997) would suggest these similarities are becoming more and more real between nations and also between organisations. Giddens (1984) and other social theorists have developed arguments about the disembedding of economic and social activity. These arguments focus on shifts in the scale and sources of embeddedness, where embedding in wider global networks supplants and redefines the consequences local or national networks. Globalisation is often regarded as a new round of disembedding (Jessop, 1999) after the disembedding of institutions such as family, neighbourhood and community in which pre-capitalist production was embedded (Polanyi, 1944). It constitutes a process that strips individuals and organisations from their local structures and allows for restructuring at a more global level (Dacin et al., 1999: 341). As well as the convergence or homogenisation thesis, this argument means that individuals and organisations will be less attached to their local or national context, and therefore one might reason that inter-national differences would pose less problems in collaborative ventures. Studies on the obstacles in international management (e.g. Adler, 1983;

Adler and Graham, 1989) and in international co-operation in higher education (e.g. Beerkens & Van der Wende, 1999) show that this process of convergence and disembedding – if present – is far from accomplished. The cultural, legal, political and social differences between countries, but also between organisations, still raise significant obstacles in cooperation.

While the resource-based view propagates a economic rational perspective on organisational behaviour, other theories look upon the university as an institution embedded in powerful cognitive, normative and regulative structures (Scott, 1995). In neo-institutional theories and embeddedness theories, the social, political and cultural environment is brought in. Instead of taking the internal capabilities as the focus of analysis, emphasis here is placed on formal and informal patterns of behaviour that are collectively shared and agreed upon. Much of embeddedness research seeks to demonstrate that market exchange is embedded in larger and more complex social processes. This builds on Polanyi's notion of embeddedness that puts forward a perspective on the economy as "an instituted process of interaction between man and his environment, which results in a continuous supply of want-satisfying material means" and that "the human economy is embedded and enmeshed in institutions, economic and non-economic. The inclusion of the non-economic is vital. For religion or government may be as important for the structure and functioning of the economy as monetary institutions or the availability of tools and machines themselves that lighten the toil of labour" (Polanyi, 1957; cited in Jessop, 1999). Granovetter (1985) extended the notion of embeddedness with the insight that embeddedness refers to the on-going contextualisation of economic activity in social structures. DiMaggio (1990) criticises Granovetter's narrow use of embeddedness to include only social relations and structures. In DiMaggio's view action and organisation is also embedded in culture and in the sharing of norms and values. Zukin and DiMaggio (1990: 14-22), categorise embeddedness as cognitive, cultural, political and structural. The institutionalist's claim is that these cognitive, cultural, political and structural pressures develop in organisational fields or national societies and lead to organisational conformity. Berger and Luckmann's (1967) argument that social reality is a human construct and a by-product of repetitive interactions supports this claim. Organisational activities thus become institutionalised over time. This perspective proved to be useful in studying processes of organisational change in a national context, including change in higher education (e.g. Huisman and Meek, 1999; Huisman & Beerkens, 2000). Prior work has demonstrated strong linkages between organisational action and institutional infrastructure of a region, state, or society. This is not simply about locational differences, but the fact that these locations are infused with different social norms and practices (Dore, 1983; Romo & Schwartz, 1995). Relationships are embedded in a broader set of socio-cultural forces that shape the nature of collective activity, individual organisational action, as well as opportunities and constraints (Dacin et al., 1999). The institutional embeddedness of organisations thus provides opportunities as well as constraints for their behaviour. On the one hand the context they are embedded in provides them legitimacy, clarity, relationships with its stakeholders etc. On the other hand, it places organisations in an 'institutional straightjacket' or an 'iron cage' (DiMaggio and Powell, 1983). This is what Uzzi labels the paradox of embeddedness: the same processes, by which embeddedness creates a requisite fit with the current environment, can paradoxically reduce an organisation's ability to adapt (Uzzi, 1997: 57). In this way, traditional 'core competencies' have the potential to become 'core rigidities' that inhibit subsequent

adaptation and success (Leonard-Barton, 1992). It is the embeddedness of institutionalised behaviour that increases its likelihood of being maintained without question. This issue may become especially salient if organisations start operating internationally, since a requisite fit with the national environment can pose problems when organisations are forced to adapt to the international context. But it is valid as well for intra-organisational practices, the routines, procedures and attitudes to work that have become institutionalised within a particular organisation. Such practices, procedures, attitudes and routines have become embedded into the organisation and might have become taken for granted. Obviously, if these become too rigid, they may cause tensions in inter-organisational collaboration. If perfect compatibility does not exist between partners in an inter-organisational arrangement, and this is inevitable, this is likely to negatively effect the performance of this arrangement (Parkhe, 1991; 1993b; Sarkar et al., 2001). Inter-organisational differences that can frustrate the performance of the collaboration are frequently related to the historical conformance of organisations to their national institutional environment and to organisational structures, procedures and routines that have emerged and have become institutionalised in this national context.

Embeddedness of and in Universities

Since contemporary universities have developed in an environment dominated by national regulations, cultures, and political and social structures, the way this context has impacted the university can not be ignored when they engage in international collaboration. In general, the perspective sketched above assumes that the institutional environment determines the university’s internal structure and the behaviour of the actor in organisations. In this section we will assess which institutionalised structures and patterns of behaviour are characteristic for the university. We will particularly focus on those features that can exemplify the differences between various universities (and their individuals) operating in different institutional environments. Institutional theory suggests that institutionalised activities are the result of interrelated processes at the individual, organisational and national level of analysis (figure 3).

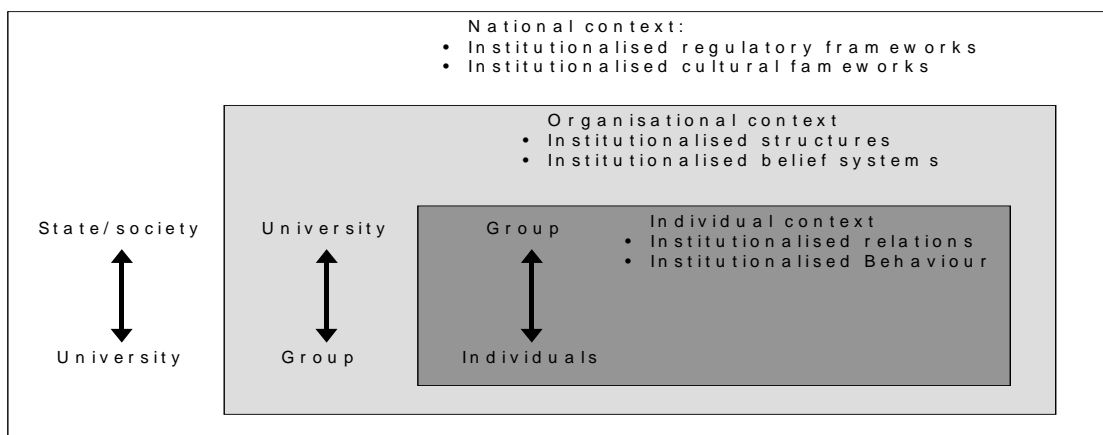


Figure 3: The institutional embeddedness of the university

At the inter-organisational level, which in post-war higher education can be equated with the local and national level, pressures emerge from governmental regulations and societal and

regional expectations. At the organisational level, organisational culture, shared belief systems and authority structures maintain institutional structures. At the group level, norms, habits and unconscious conformity to traditions, by both administrators, academics and other professionals, account for institutionalised activities. These three levels form the roots for the embeddedness of the university in wider structures, and therefore can cause friction in international inter-organisational collaboration.

First the majority of universities have evolved in national settings (Scott, 1998). This can be relegated to their relationship with government and its relation to (national) society as a whole. The relation with government mainly refers to the level of autonomy that governments confer to their universities, ranging from full state agencies to completely private universities. The level of autonomy is assessed on various dimensions, such as the level of funding, the method of funding, regulations about appointment and employment status of faculty, quality assurance and assessment mechanisms. The embeddedness of the university in the national environment is not only based on regulatory frameworks but also depends on historically emerged etiquette, manners and protocols. This concerns factors like power distance, masculinity, uncertainty avoidance, and individualism (Hofstede, 1980). Also, national notions on the role of the university and perspectives on excellence and equality materialise in a national historical context. Structures and belief systems can also cultivate within organisations. Structure refers to the formal decision-making structures, internal allocation structures, and regulations for promotion and career advancement opportunities. The organisational belief system refers to collectively shared ideas about how the university should operate. What is the collective opinion on applied versus theoretical research, on contribution to society versus independence, on teaching versus research, undergraduate versus graduate education, national versus international orientation? These are attributes of the organisational culture (see Hofstede, 1991). Often a distinction is made between organisational culture and organisational climate. Organisational climate is similar to organisational culture except that it is more concerned with organisational practices than organisational values and focuses on a particular point in time rather than a historical perspective (Hellriegel and Slocum, 1974; Denison, 1996). Questions related to this issue can be diverse. What is the central level influence on research and teaching subjects or methods? How is (student and faculty) participation arranged in the university? What opportunities does the university offer for self-development and training? The last level concerns the individual context. Here we are interested in how particular inter-personal relations and patterns of behaviour have become institutionalised within the immediate environment of the individual. Groups can refer to all kinds of professional clusters, like faculties, schools, institutes or offices, but also to groups that exceed organisational boundaries, such as individuals that adhere to a specific discipline, research traditions, professional associations, etc. Members of a research group for instance might have developed a shared notion on which methodologies should be used in particular science, or on what topics should be treated in an introductory course on sociology.

Figure two also illustrates that lower level context might possess their own dynamics and beliefs, but that they are also embedded in the wider organisational or national context. Individuals thus have multiple institutional affiliations on different levels. This also illuminates the ambiguous environment in which individuals operate, where in some aspects they relate their behaviour to their national citizenship while in other instances they act as a member of the

university or as a member of a particular professional community. All – nations, organisations, groups – have developed routines, norms, and patterns of behaviour in the course of time. An obvious assumption than is, that these routines, norms, and patterns can create obstacles when collaborative arrangements are established with nations, organisations and groups that are not compatible with these institutionalised practices and ideas.

Compatibility in inter-university collaboration

We identified a minimal level of compatibility as one of the preconditions for collaboration to succeed. Compatibility implies a social and cultural fit between the partners. It is frequently believed that differences in the societal culture, national context, organisational culture and organisation's operating characteristics negatively affect collaboration (Parkhe, 1993c). The influence of a society's culture has a widespread effect on all aspects of life and therefore can affect cross-cultural interactions in many ways, especially if close individual collaboration is required to accomplish particular projects. Inter-cultural differences can have a deep impact on crucial alliance-processes such as problem solving, conflict resolution and negotiations. Direct behaviour and open confrontation in inter-personal interaction is less appreciated in cultures where 'loss of face' and embarrassment is to be avoided. In the international business literature, many comparative and single-culture studies have appeared on the cultural implications on the behaviour of managers in various countries (see Adler and Graham, 1989). Many of these studies supported the above mentioned similarity hypothesis of Evans (1963). Another major obstacle in inter-personal communication is language and language behaviour (Graham and Andrews, 1987).

Incompatibility in national regulatory systems can affect international co-operation in higher education in many ways. Especially in student and staff mobility many problems arise such as differences in educational systems, and in the legal position of students and staff (Beerens, 2000; Van de Bunt-Klokhuis, 2000). Legal problems in the field of faculty appointments may also arise when separate organisations are established within networks. Governmental restrictions on the establishment of new programmes can frustrate the launching of joint programmes. In this respect, when quality assurance indicators are set on a national level, also the international differences in quality standards can play an obstructing role. Also, differences in programme funding might hamper co-operation. Regulations on funding, and differences in the financial leeway for universities, can also play a role if particular facilities are shared or when joint investments are needed for new facilities. Not only legal factors can create incompatibility due to the national context. Universities are also embedded in a wide network of social and pragmatic relations with intermediary organisations, business, and other educational institutions. Universities have created a pattern of inter-organisational relations and have adjusted their conduct to emerged norms and values for administration and governance. Also, beliefs about equity and authority have developed in interaction with governmental organisations, intermediary organisations and other universities. Universities have developed in such a context and have conformed their structures and also their cultures to these relations and beliefs.

The diversity of university-structures and cultures can have an obstructing and moderating effect on the collaboration process. Some universities may be perceived as bureaucratic, others as collegial, or as political (Baldrige, 1971), even perceived dissimilarities of universities along these

lines can cause friction. If members of bureaucratic partners collaborate with their colleagues who are members of more flexible universities, this might cause irritation. The same claim can be made for universities with dissimilar authority structures, where some of the individuals in the collaboration process have the authority to take decisions while others first need to report back to their superiors. University cultures have developed in the course of time and have their own history, perspectives and values. Often the university's culture is seen as a singular characteristic of a higher education institution. Bergquist (1992) however proposes a mixture of various cultures in universities, where a particular culture may be dominant but other cultures are always present and interact with the dominant culture. Bergquist in this respect identifies four different cultures: the collegiate culture, that finds meaning primarily in the disciplines; the managerial culture, that finds meaning primarily in the organisation, implementation and evaluation of work; the developmental culture that finds meaning primarily in the creation of programmes and activities furthering the personnel and professional growth of all members; and the negotiating culture that finds meaning in the establishment of equitable and egalitarian policies and procedures for the distribution of resources and benefits in the institution. Culture and structure are also shaped by the strategic direction the university is heading for, often exemplified by a 'hallmark' like traditional, comprehensive, entrepreneurial, innovative, student-centred, etc. In the course of time such traits start a lead a life of their own and gain some kind of common identity for the universities members. Also managers, administrators and academics have to some extent been socialised in such cultures and structures and consequently dissimilarities in these can initiate conflict or misunderstanding.

However, studies have shown that the firm's overall organisational culture is not able fully to homogenise values of employees (Laurent, 1983), an argument which is especially relevant for academics in a professional organisation like a university. Academics in particular are also very much shaped by professional and disciplinary insights, norms and values. Even when co-operation in a particular field seems complementary at first sight, differences in sub-specialisation, theoretical orientations and methodological considerations may be incompatible in the actual process of collaboration. In addition, academics may well have complete diverging ideas about education methods and contents, something that can cause frictions in co-operation on the programme level. Individual academics however are not only organisationally and disciplinary embedded individuals, they are also distinctive individuals (Kogan, 2000). All have their own unique history and possess their own networks, which may but not often do coincide with the network of the university as a whole. In the choice of their partners institutions can not take into account all individual international networks that the individual academics have established. If a personal network does coincide with the university's network, the prospect for compatibility is likely to be more positive. The above shows a wide variety – though all but exhaustive – list of examples of embedded structures, relations, behaviour and beliefs that can cause frictions in the process of collaboration due to incompatible features of the partners. We do however contend first of all that not all dissimilarities will cause frictions to that extent that cooperation becomes impossible. As we stated before, in many cases dissimilarities that seem to produce incompatibility can even be a cause for complementarity. Furthermore, networks can be managed and various mechanisms can be employed in order to cope with these incompatibilities.

5 Managing diversity in evolving networks

Two perspectives, one university?

Above we observed that a university makes decisions on the acquisition of resources and that these decisions can be characterised as economically rational within the constraints of limited information, cognitive biases and causal ambiguity. According to this view, the university rationally identifies and acquires resources that are valuable rare, imperfectly imitable and imperfectly substitutable in order to perform on an above-normal level (Barney, 1991, Peteraf, 1993, Amit and Schoemaker, 1993). On the other hand we observed that these universities and their members are embedded in a specific regulatory, social and cultural context. At the national level, public and regulatory pressures and sector-wide norms influence this context. At the university level, organisational culture, climate and politics affect make up this context; and at the individual level the context includes decision-makers norms and values and professional and academic standards and routines. Does this imply we are dealing with two different universities operating in different ways? Obviously it does not. We do not see the perspectives above as incompatible. We argue that one university operates in different ways because it is situated in an ambiguous environment. Decision-makers take 'cognitive short cuts' (Johnson 1987: 45) or existing models which have a rhetoric legitimacy, as their point of departure (Nohria and Gulati, 1994). We do not leave the assumption of intended rationality but argue that rational choices are based upon rational deliberations. Balancing various and sometimes contradictory demands form the challenge of these deliberations. Universities in the contemporary environment – typified by tight budgets and diverging demands in relation to effectiveness and efficiency – rational considerations include an assessment of the existing situation and the deviance of the proposed change with this existing situation.

Rationality based on efficiency and effectiveness thus remains the foundations of the decisions. But, if projected changes will dissent from existing structures, practices or norms, a reflection will take place between the foreseen profitability and the level of congruence with existing practices. These decisions about effectiveness and efficiency on the one hand and about congruence or 'fit' on the other are like two sides of the same coin. If the anticipated change in the resource portfolio of a university is expected to deviate strongly from the institutional environment in which it is embedded, strong resistance is likely, which in turn will undermine the effective and efficient use of such resources. In addition for 'value-laden' institutions like universities, competitive advantage is not only about efficiency and effectiveness but also about legitimacy. Due to ambiguous and imprecise indicators for efficiency and effectiveness, the perceived legitimacy and social acceptance are valuable assets for the university in attracting high-quality students, reputable staff and necessary funding. The congruence or 'fit' part of the deliberation is obviously especially important for 'bottom-heavy' organisations like universities. Decisions thus come about through a rational deliberation between expected advantage and expected resistance. The one side is emphasised by the resource-based view, the other by the embeddedness and neo-institutional perspectives (figure 4)

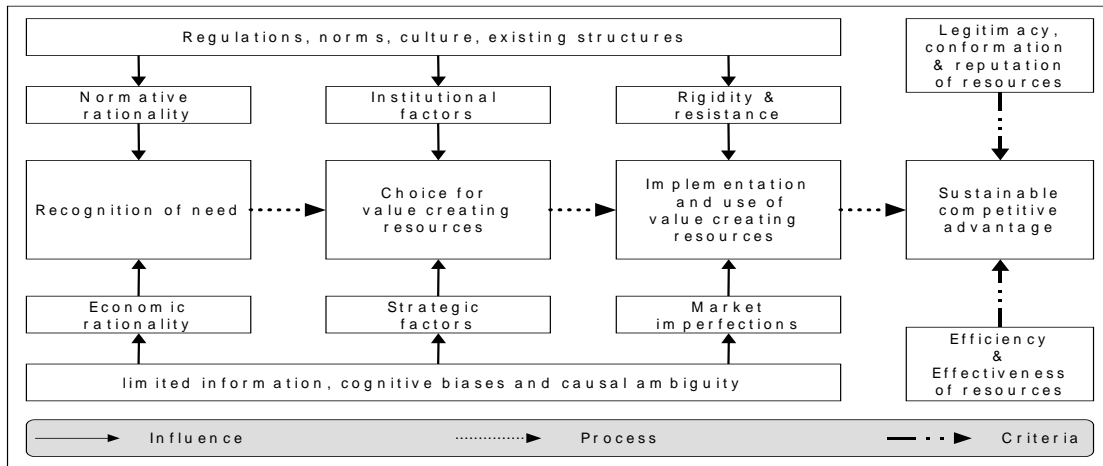


Figure 4: A resource based view of the embedded university (adapted from Oliver, 1997)

Expected advantage in efficiency and effectiveness however is a factor that, especially in the for-profit sector, can be supported by various economic models and marketing research. Expected resistance is harder to grasp in models and formula's and therefore is hard to estimate. If the assessment is inadequate, institutional pressures will get going. This point is lavishly supported by implementation research (e.g. Pressman and Wildavsky, 1973), including in the field of higher education (e.g. Cerych and Sabatier, 1986, Van Vught, 1989; Bartelse, 1999). In acquiring, developing or implementing new resources, organisations always accept some level of risk with regard to efficiency and effectiveness, they also accept a particular level of risk with regard to the acceptance and congruence. In international inter-university networks there will also be a limited level of risk concerning the complementarity of the partner's resources. It is assumed however that universities choose their partners on the basis of what they can offer, that is, on the basis of what resources are needed and who possesses such resources. The formal goals, missions and strategic plans of inter-university networks can support this (see Wächter, 2000). This does not imply that complementarity is perfect and fixed. Limited information and cognitive biases and causal ambiguity cause sub-optimal complementarity and changes in the resource bases of participating universities lead to shifting balances over time (see next section). The compatibility-consideration however, seems to be less carefully incorporated in the decisions to cooperate. These considerations are often based on rather elusive arguments like locational similarities (e.g. all universities are located in the EU, all universities are located in capitals, all universities are located in a particular region) and/or abstract organisational similarities (e.g. all members are traditional universities, all members are innovative universities, all members are reputable research universities). In the evolution of these networks, the crucial question than becomes how do a lack of complementarity and incompatibility affect collaboration between the partners and how can negative consequences be dealt with or avoided.

Complementary resources and compatible backgrounds in inter-university collaboration

Oliver (1997: 697) argues that a firm’s sustainable advantage depends on its ability to manage the institutional context of its resource decisions. A firm’s institutional context includes its internal culture as well as broader influences from the state, society, and inter-firm relations that define socially acceptable economic behaviour. We can extend this argument for IIN’s by stating that a network will attempt to manage the institutional context of its resource decisions. Even so, the resource decisions are not fixed. The resources to be shared in IIN’s are expressed in the portfolio of activities and projects an IIN has agreed upon. When discrepancy emerges in this portfolio, coping mechanisms need to re-establish the portfolio of activities, that is, decide about the abolishment of existing projects, about the establishment of new projects or the change in content or composition of projects in progress in order to arrive at a balanced, complementary portfolio. If in the implementation and use of projects, features of the partners seem to be incompatible, the network needs to apply institutional mechanisms in order to reduce, avoid or solve problems due to dissimilarities, after which the endeavour to perform can proceed (Fig. 5).

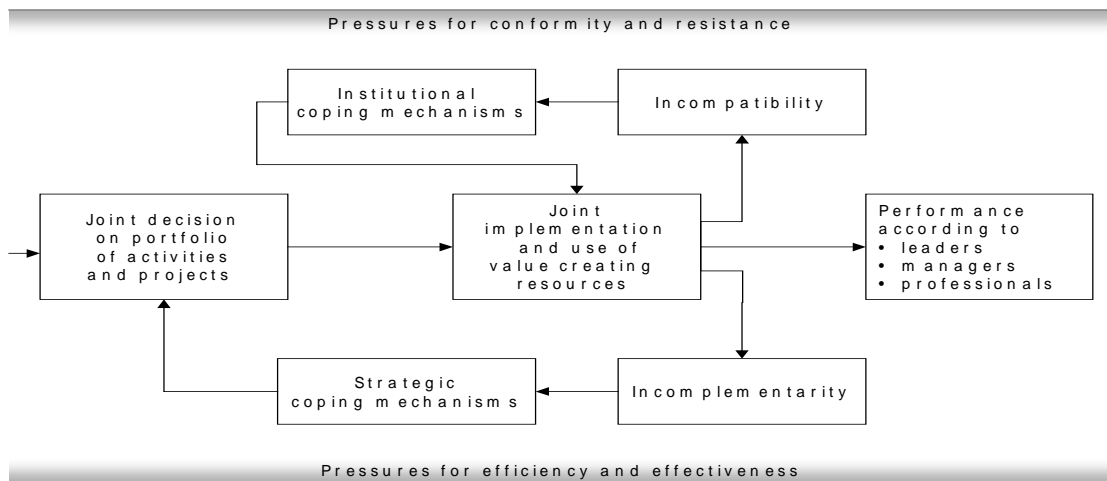


Figure 5: A model of collaboration and correction mechanisms

The model above leads us to our two basic hypotheses:

H1: The higher the level of complementarity between the participating universities the higher the level of performance of the network

H2: The higher the level of compatibility between the participating universities the higher the level of performance of the network

As we stated before, we assume that universities seek collaboration as a means to obtain strategic resources that it doesn’t possess itself. Viable alternatives for obtaining those resources are to acquire them on the market, or in other words buy them, or develop them – or alternatives for these resources – within the own university. These are not viable options in the case of strategic resources. They can not be bought because they are immobile or too valuable, they can not be developed because they are inimitable and there is no alternative because they are not

substitutable. The lower part of figure 5 explains that when there are no more strategic assets or resources exchanged in the collaboration, complementarity disappears and new opportunities for exchange should be explored. If activities or projects are decided upon where there is ample opportunity for collaboration due to a complementarity between the partners, the parties involved start with the activity concerned and possible sources for incompatibility may appear on the scene. If this is the case, the network can react to these sources through employing institutional coping mechanisms. Such mechanisms are meant to solve the problems that arise due to the incompatibilities. This does not imply that the differences that cause the incompatibility need to be eliminated, but rather that the tensions that these differences produce need to be removed or alleviated. This however, is where the diversity-paradox, introduced in section 2 becomes apparent since many sources of incompatibility are related to the sources of complementarity. As we saw before, these are two sides of the same coin and therefore the art of the game is to cope with incompatibility without corroding complementarity. The simple fact that other universities are embedded in other institutional environments are the major reason for universities to cooperate because the resources sought in co-operation have themselves developed in these particular environments. In the next section we will introduce strategic coping mechanisms and institutional coping mechanisms. Strategic coping mechanisms contribute to the exploitation of complementary resources, while institutional coping mechanisms attempt to overcome incompatible backgrounds.

H3: The use of strategic coping mechanisms will enhance complementarity between the partners in the network

H4: The use of institutional coping mechanisms will enhance compatibility between the partners in the network

The four hypotheses above form the starting point for our empirical analysis. The next step is the operationalisation of the concepts 'performance', 'complementarity' and 'compatibility' and the identification of different categories of institutional and strategic coping mechanisms.

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