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8 The resource dilemma of temporary organizations: a dynamic perspective on temporal embeddedness and resource discretion

René M. Bakker, Bart Cambré and Keith G. Provan

INTRODUCTION

Ever since seminal work dating back to Penrose (1959), Wernerfelt (1984) and Barney (1991, 1996), resources have gained widespread attention as crucial factors affecting organizational performance. Moreover, theories such as the Resource Based View (RBV) and Resource Dependency Theory (RDT) have, over the years, successfully staked claims to give center stage to resources in organizational analysis. Building on this resource-centered view, in this chapter we will attempt to contribute to the nascent field of temporary organizations (TOs) by exploring the resource dilemma faced by this particular form of organization and by formulating a number of testable propositions. On one hand, TOs depend on others for resources while, on the other, they require autonomy. Our central premise is that, based on this conflict, TOs face a dilemma regarding resource dependence. This dilemma is due in part to TOs' dependence on a limited set of outside sources for their resource needs. In contrast to non-temporary organizations, TOs generally lack the time to build up regimes to produce their own assets and slack resources. As Lundin and Söderholm mention (1995, p. 439), three of their four defining concepts of TOs are 'constituted by resource allocations' from an outside source to the TO. Thus, a TO's resource base heavily depends on its founders, one or several parent organizations (POs) that collectively decide to develop a TO for working on a joint project. This means that generally TOs rely heavily on allocated resources over which they have little or no control (see Gower, 1983). In RDT terms, this means that TOs have a high external dependence, usually on multiple organizations, and that they have little or

no capacity to acquire resources from alternative sources, increasing their dependence even further.

In order to function effectively, it is generally understood that some level of autonomy is beneficial for both organizations and project teams (see Cohen and Ledford, 1994; Ernst, 2002; Gerwin and Moffat, 1997; Stewart, 2006; Thamhain, 1990; Wall *et al.*, 1986). Based on the above propositions about how TOs function, this constitutes the fundamental resource dilemma for TOs, which will be the main focus of our conceptual arguments. Specifically, TOs are extremely dependent on resources that are externally controlled by their parent organizations. At the same time, TOs need a certain level of autonomy in order to function successfully.

To explore this resource dilemma, in this chapter we will focus on how one specific characteristic of TOs – namely, their temporal embeddedness, or the extent to which the TO is embedded in past and future sequences of activity (Lundin and Söderholm, 1995) – impacts on a TO's degree of discretion over allocated resources. We will take into account the anticipated duration of a TO as a key moderating variable in this relationship. As Janowicz-Panjaitan, Bakker and Kenis (Chapter 2, this volume) have elaborated, we conceive of the temporariness of TOs as having a limited, but not necessarily short duration, implying an awareness of impending termination among TO members. Anticipated duration of the TO (which is fixed *ex ante*) can thereby vary across TOs. By including temporal embeddedness and anticipated duration as variables in our discussion, we take a view of TOs as phenomena that exist and change over time, and function according to their own dynamic. In doing so, we explicitly seek to overcome the static view of TOs that has prevailed in the body of literature (see Engwall, 2003) and has produced some contradictory views on TOs' optimal functioning. Consequently, we address the recent call to incorporate temporal features into organization theory (see George and Jones, 2000) and into the resource- (Priem and Butler, 2001) and project-based literatures (Engwall, 2003) in particular.

The primary aim of this chapter is twofold – to conceptually explore the resource dilemma of TOs, taking into account the TO's specific temporal arrangement, and to formulate testable propositions concerning the implications of temporal embeddedness on discretion over resource use. In the discussion, we consider the theoretical implications of our arguments. Specifically, we demonstrate how our dynamic perspective on resource dependencies between TOs and POs facilitates an understanding of TOs that goes beyond a more traditional, static view of the PO–TO relationship. Finally, we infer a number of managerial implications from our analysis concerning the successful management of the resource dilemma of TOs.

THEORETICAL FRAMEWORK

Temporary Organizations and Resources

There are many definitions of TOs in the current body of literature. In line with the conceptualization of TOs presented by Janowicz-Panjaitan, Cambré and Kenis in the Introduction to this volume, we define a TO as a group of at least two parent organizations (POs) collaborating toward the accomplishment of a joint task, with the duration of the collaboration explicitly and *ex ante* fixed, either by a specific date or by the attainment of a predefined state or condition. Joint task is operationalized into two dimensions, 'joint execution of the task' and 'jointly carrying the risk for the collaboration', with either characteristic sufficient for labeling the collaboration a TO but only if the collaboration is consciously set up with a termination point in mind (see the Introduction to this volume). This definition of TOs determines the scope of an interorganizational aggregate that is composed of at least two POs. Examples of TOs include, but are not limited to, construction projects like the Channel Tunnel, movie sets and organizing major sporting events (Bechky, 2006; Meyerson *et al.*, 1996; Miles, 1964).

Resources are critically important to TOs. A number of past studies reinforce this assumption. In the project management literature,[1] for instance, resources are seen as critical and have been the focus of much discussion (see Al-jibouri, 2002; Angling, 1988; Dzeng and Wen, 2005; Engwall and Jerbrant, 2003; Gower, 1983). One well-known definition of projects (Cleland and Kerzner, 1985, p. 199), holds that projects involve 'a combination of human and non-human resources pulled together into a temporary organization to achieve a specified purpose'. Engwall and Jerbrant (2003) found that in project settings, 'the primary management issue revolved around resources' (p. 406).

Katz and Gartner (1988) argued that resources are particularly important in firm start-up because they are so vital for the early survival of emerging organizations ('organizations-in-creation'). In general, as organizations age, the necessity for external resources declines somewhat, while organizations build up their own assets and reserves, and thus establish a resource buffer often referred to as organizational slack (Bourgeois, 1981), upon which they can draw. Since TOs need to 'negotiate afresh for resources as each is started' (Turner and Müller, 2003, p. 4), and since TOs generally lack the time to build up their own reserves, resource dependencies on other organizations are especially critical for understanding how TOs operate.[2]

Resource-related Theorizing

The main theoretical foundations for the present discussion on the resource dilemma of TOs lie in the Resource Based View (RBV) and Resource Dependence Theory (RDT); we draw heavily upon the latter. Although they take different approaches to the role of resources in organizations, they do share a common issue – a clear focus on resources and organizations. For clarification, we adopt a definition of resources as 'those (tangible and intangible) assets which are tied semi-permanently to the firm' (Wernerfelt, 1984, p. 172). A commonly cited taxonomy of resources is provided by Grant (1991), who distinguishes between financial, physical, human, technological, reputational and organizational resources.

The Resource Based View starts from the premise that the trend in research during the 1970s and 1980s, which focused heavily on an organization's environmental opportunities and threats, needed to be counterbalanced by an internal analysis of a firm's strengths and weaknesses. This premise is rooted in two fundamental assumptions, which differ from those implicitly underlying externally oriented models, such as those developed by Porter (1980); firms may be heterogeneous with respect to the strategic resources they control, and resources are 'sticky', or not perfectly mobile across firms. Therefore, the RBV successfully redirected strategy scholars to resources as important antecedents for firm performance (Priem and Butler, 2001). The central logic of the RBV was proposed most clearly by Barney (1991), who argued that possession of certain types of resources (those that are valuable, rare, difficult to imitate and non-substitutable) can lead to sustained competitive advantage (see Priem and Butler, 2001).

Despite initial concerns by RBV scholars that RDT neglects the internal role of resources, RDT actually complements the RBV. RDT does not deny the importance of internal resources, but instead, proposes that organizations cannot generate all necessary resources internally. Thus, organizations must mobilize resources from other organizations in their environment if they are to survive (see Pfeffer and Salancik, 1978; Yuchtman and Seashore, 1967). This basic idea has been extended by Gulati (2007), whose work has demonstrated that resources reside in networks of other organizations and embeddedness in that network is critical for access to and leveraging these resources.

For the present discussion, the most crucial aspect of RDT is its premise that, on the one hand, organizations partly depend on their environment to fulfill their resource needs, as actors in the firm's environment control resources critical to the focal firm's business (Pfeffer and Salancik, 1978).

On the other hand, organizations seek autonomy over their actions. One of the ironic consequences of this tension is that organizations must surrender some of their own autonomy to gain control over resources possessed by another organization (Pfeffer and Salancik, 1978). The underlying dilemma is well known as the autonomy dependency dilemma: organizations want to maximize discretion to modify (future) actions (autonomy), yet, at the same time, organizations need resources owned by other organizational entities (dependency). This RDT-inspired issue forms the basis for what we have deemed the resource dilemma for temporary organizations.

Despite the value of both RBV and RDT for explaining the importance of resources and the resource acquisition process for organizations, we adopt RDT to explain our main research question. Fundamentally, an interorganizational TO itself constitutes a bridging solution to a resource dependence problem for the parent organizations (Chapter 3, this volume). Yet, by setting up a TO, a new resource dependence tension is created, this time between the POs and the TOs. As noted above, we view the key dilemma for TOs as being able to simultaneously address the resource dependence on its POs, while functioning autonomously, making decisions that will lead to the success of the temporary project being undertaken. For TOs, unlike distinct organizations such as POs, the dilemma is made even more problematic by the fact that TOs cannot seek out alternative sources for needed resources (Jacobs, 1974). Initially, TOs are totally dependent on their POs and must manage the resource dependencies they are handed.

There are two functional components of the resource dilemma faced by TOs: autonomy and dependence. We have already made the case that for TOs, the tension between these two is especially salient given their extreme dependence on external resources from non-temporary organizations and their need for some level of autonomy over allocated resources to successfully accomplish their task. To operationalize autonomy, we focus on the level of discretion over resources as the fundamental issue from the TO's perspective. More specifically, the managers who are in charge of the TO may exhibit varying degrees of autonomy regarding how and where TO resources are allocated, ranging from little or no discretion (the PO management decides) to total discretion (TO managers allocate resources as they see fit). Regarding dependence, most TOs depend nearly exclusively on their parent organizations. However, we propose that TOs may be able to moderate their dependence based on a factor that is unique to temporary forms of organizing; namely, a TO's level of temporal embeddedness. The logic underlying the importance of temporal embeddedness is discussed below.

Temporal Embeddedness

TOs generally have a clear start and end, which is a case of clear boundary setting in time, otherwise known as time bracketing (see Lundin and Söderholm, 1995). Beyond the time brackets that distinguish the TO's start and end, there are also past and future activities that can have a potentially strong effect on the functioning of the TO during its lifetime. In fact, Engwall (2003) proposed that TOs should be studied in their temporal context, because seemingly interior processes within TOs are influenced by their history and anticipated future,[3] which extend beyond the TO's current existence. Using the label 'temporal embeddedness', we refer to the extent to which a TO is embedded in past and future activities, beyond its inception and termination (see Lundin and Söderholm, 1995).

One way to make this concept concrete is by focusing on the parent organizations (POs) that establish the TO. POs generally collaborate with other firms on an ongoing basis,[4] through a host of alliance structures ranging from an informal 'relational contract' (Grant and Baden-Fuller, 2004, p. 62) to more formal agreements such as research and development partnerships, equity joint ventures and collaborative manufacturing (Gulati, 1995; Powell *et al.*, 1996). In principle, when these POs, in an ongoing collaboration, decide to found a TO together, this TO is embedded in prior and future collaboration among the POs. So, in general, when there has been collaboration among the POs, or if they plan to collaborate again after the TO has been terminated, the temporal embeddedness of the TO is high. When there is no prior collaboration between the POs, and/or they do not plan to do so again in the future, the temporal embeddedness of the TO is likely to be low (see Figure 8.1).

However, we contend that temporal embeddedness is not solely a zero/one variable based on whether the partners have collaborated in the past or plan to do so in the future. Instead, we contend that the temporal embeddedness of the TO is also a function of the extent to which the TO is a continuation of this prior collaboration or is seen as being tied to future collaboration with these same POs. In this sense, the degree of temporal embeddedness may be envisioned as a continuum that is dependent upon factors such as the time horizon (for instance, whether the prior collaboration took place six months or six years before) and on the extent to which the same individuals and POs are involved and/or will be involved in future collaboration. In the next section, we explicitly link temporal embeddedness to the resource dilemma, and propose a number of testable propositions concerning its operation and implications.

Expectation of future collaboration between parent organizations	*Past collaboration between parent organizations*: Yes	*Past collaboration between parent organizations*: No
Yes	(1) TO part of ongoing collaboration (temporal embeddedness high)	(2) TO as a test case for future collaboration
No	(3) TO as closure of past collaboration	(4) 'Pure' TO (temporal embeddedness low)

Figure 8.1 *A typology of temporary organizations based on temporal embeddedness*

INQUIRING INTO THE RESOURCE DILEMMA

Crucial for the present discussion is the link between a TO's level of temporal embeddedness and the resource dilemma, and the implications this link has for the functioning and performance of TOs.

We suggest that a high level of temporal embeddedness in past and future sequences of activity will result in TOs having more autonomy over decisions, and more specifically, more discretion over resource use. It follows from RDT that when a TO is dependent on resources controlled by any one of the TO's founding POs, the PO will have power over the TO (see Pfeffer and Salancik, 1978, p. 132–133). High dependence on the part of the TO for resources controlled by its POs, coupled with the TO's inability to obtain these resources elsewhere, is likely to create a highly unbalanced power relationship between the TO and POs with respect to the allocation and use of resources (see Pfeffer and Salancik, 1978). Thus, this imbalance implies a low capacity for TO influence over decisions.

The main reason for TO discretion over resources is its high level of temporal embeddedness in the past and future. When temporally embedded, trust can develop over time among POs and between the POs and the TO. Temporally embedded TOs will have had the opportunity to

draw on past experience and reputation to address issues related to the use of PO-controlled resources, procedures, documents and personnel. In addition, temporally embedded TOs will have a longer shadow of the future[5] (Axelrod, 1984; Miles, 1964), resulting in more incentives for joint cooperation (see Heide and Miner, 1992) between the TO and its POs and a lower level of uncertainty for the TO. This, in turn, is likely to result in lower reliance on the POs for developing and implementing procedures, for conflict resolution and especially for discretion over resource use by the TO. In principle then, a high level of temporal embeddedness is likely to increase TO autonomy relative to its POs.

Conversely, temporally disembedded TOs are decoupled from past and future activity relative to the POs. In the case of extreme temporal disembeddedness, a TO constitutes a first collaboration for a PO. This scenario implies that the POs have had no opportunity to develop trust between or among one another, especially in regard to collaborative alliance. A negative relationship between trust and uncertainty is common (see Das and Teng, 1998). In other words, on average, temporally disembedded TOs will have had less opportunity to develop a trust relation with the other POs, and therefore, the POs may be more uncertain about the TO's functioning and performance. A similar argument holds for the expectation of future collaboration, which is absent in TOs with no temporal embeddedness. Specifically, an expectation of and commitment to future collaboration is likely to be perceived as an indicator of confidence in the collaboration (Das and Teng, 1998), while its absence will very likely be perceived as the opposite, augmenting uncertainty. As a result, when TOs are temporally disembedded, either in past or in the expectation of future involvement, we expect the POs to 'keep a tighter leash' on the TO, resulting in less discretion over resources.

In summary, TOs are highly dependent on their POs for resources. Because of this dependency, there is an unbalanced power relationship favoring POs. As a result, TO autonomy is likely to be low. However, TO autonomy, and specifically discretion over resources, is likely to increase with the level of temporal embeddedness, especially because of the increased trust that develops from past collaboration as well as the expectation of future relationships. It follows that:

Proposition 1: The stronger the TO's level of temporal embeddedness in past and future sequences of activities, the higher the TO's level of discretion over allocated resources.

One important aspect moderating the proposed relation in proposition 1 is the anticipated duration of the TO. As mentioned above, we conceive

of the temporariness of TOs as having a limited, but not necessarily short duration, implying an awareness of impending termination among TO members. The anticipated duration of TOs varies. We expect that a longer anticipated duration will weaken the effect of temporal embeddedness. There are two reasons for this. First, the longer the anticipated duration of the current TO, the less relevant its past and future involvement beyond the TO's existence will be. As the existence of the TO lengthens, time becomes available to, for instance, set up procedures, train personnel and codify information in documents during the TO's existence. Thus, there is less need to rely on past and future PO collaboration. Second, the longer the TO works with the POs on a current project, the more likely it is that trust will develop between the TO and POs. In other words, when the anticipated duration of the TO is relatively long, trust can develop during the TO's existence, even when temporal embeddedness is low, thereby compensating for a lack of prior trust building before the TO's existence. As we argued above, trust is likely to enable the TO to exercise greater discretion over resource decisions.

In conclusion, a longer anticipated duration of the TO for a particular project decreases the effects of temporal embeddedness with respect to past and future sequences of activities. As the anticipated duration of the TO increases, trust developed through prior collaboration is likely to become less relevant and trust to be built during the TO's existence more so. It follows that:

> *Proposition 2: The relation specified in proposition 1 is moderated by the anticipated duration of the TO; the effect of temporal embeddedness on the TO's discretion over resources will be weaker when the anticipated duration of the TO is longer.*

The relationships specified in propositions 1 and 2 with respect to the TO's discretion over resources can have a strong impact on the performance of a TO. It is a consistent finding in work on project groups and so-called self-managing work teams that more discretion is associated with enhanced performance.[6] For instance, Cohen and Ledford (1994) found that in a telecommunications company, self-managing teams (characterized by high discretion, among other factors) were more effective than comparable traditionally managed groups that performed the same type of work. Gerwin and Moffat's findings (1997) bolstered this conclusion; their data from 53 cross-functional product development project teams indicated that withdrawing autonomy is negatively correlated with team performance. Moreover, autonomy has emerged as one of five organizational success factors for new product development project teams (Ernst,

2002), and positive effects of increased project team autonomy on a host of performance criteria have been shown to hold in a meta-analysis (Stewart, 2006).

In line with these findings, we propose that discretion over resources is positively related to the performance of TOs.[7] Having more discretion implies that the TO can decide how and when resources are to be deployed, allowing for more flexibility in dealing with shifting task and environmental contingencies. Agency theory (see Jensen, 1983; Jensen and Meckling, 1976) has clearly established that the agents – the TOs – usually have more intimate knowledge of the task at hand, and exactly how to perform it, than the principal(s) – the POs. Moreover, this information asymmetry between agent and principal is likely to be greater in short-term agency relationships (Eisenhardt, 1989). By allowing the more knowledgeable TO agent greater discretion over the use of allocated resources, the decisions made are more likely to be consistent with the execution of the project and its specific phase (see Turner and Keegan, 2001). This in turn will likely boost performance of the TO.

We contend that two factors are particularly important to establish the performance of TOs: the TO's ability to attain its goals and to meet a predefined deadline. The importance of goal attainment is rooted in the common notion that TOs are generally set up to accomplish a clearly defined goal which constitutes their very *raison d'être* (Lundin and Söderholm, 1995; Kerzner 1994). Thus, this goal is clearly one of the most prominent project success criteria (see Dvir *et al.*, 2003). The second performance criterion, a TO's ability to meet deadlines, flows from TOs being temporary; time will be limited to complete certain tasks, either by date (for example, 'finish before 1 July') or by a certain state or condition (for example, 'finish before the other partners become impatient' or 'remuneration will take place when the project is finished'). It is hardly a surprise then, that time is one of the fundamental concepts in the 'iron triangle' of project success (see Atkinson, 1999). For the reasons outlined above, we propose that both the TO's ability to attain its goals and to meet deadlines are positively affected by a higher discretion over resources by the TO. It follows that:

Proposition 3: A TO's performance is directly related to the discretion it has over its allocated resources: the more discretion, the better able it is to attain its goals and meet a predefined deadline.

In addition to the positive impact that discretion over resources has on the performance of TOs, a reverse effect might also hold – when viewed from a dynamic perspective, over time the performance of the TO may

affect the discretion over resources that POs grant the TO. For instance, the TO attaining milestones might contribute to trust and confidence from the POs, resulting in greater cooperation and autonomy for the TO (see Das and Teng, 1998).

Therefore, we propose that if a project performs well in its initial phases – meeting its interim deadlines and milestones – the TO will gradually increase its discretion over resources as the project matures. Based on this logic, our final proposition can be stated:

Proposition 4: The higher the performance of the TO on a current project, the greater the TO's discretion over allocated resources as the project progresses.

DISCUSSION

In this chapter, we set out to explore the resource dilemma faced by TOs. We suggested that this dilemma reflects a fundamental tension between autonomy and dependence, and that the impact of this tension is especially significant for TOs. By focusing on the TO's level of embeddedness in past and future sequences of activity, we explicitly sought to overcome a weakness of many resource-centered analyses, namely, neglecting the temporal element (see Priem and Butler, 2001) and making predictions about how history and anticipated future involvement relate to tensions over resources. In the following, we discuss the theoretical and managerial implications of our work.

Implications for Theory

One major theoretical issue that is closely related to our ideas and propositions can be expressed as: 1) the extent to which TOs should be analyzed as open or closed systems, and 2) the extent to which TOs function as open or closed systems. In terms of analysis we follow Engwall (2003) in arguing that projects should not be viewed as 'islands', detached from history and context, but rather as 'history-dependent and organizationally-embedded units of analysis' (p. 790). Engwall further argues (p. 790) that TOs[8] have to be conceptualized as 'contextually-embedded open systems, open in time as well as in "space"', and that no TO either takes off from, or is executed in, an organizational vacuum. Following Engwall (2003), in our propositions concerning temporal embeddedness, we explicitly took up the call to analyze the impact of history and anticipated future on the functioning of TOs.

With regard to the functioning of TOs, the benefits of system openness and embeddedness have been noted, for instance with respect to project-based learning (Scarbrough *et al.*, 2004) and with respect to knowledge sedimentation (Grabher, 2004). Although other scholars certainly do not deny the claim that no project exists in a complete vacuum, nor that they should not be analyzed as such, the 'TOs-as-open-systems' stance does not go completely unchallenged with regard to the functioning of TOs.[9] For instance, Miles (1964) argued that in order to function properly, temporary systems need a certain degree of closure. More specifically, Miles argued that a TO can form a protective shelter, a bubble, or what Lewin (1947) referred to as a 'cultural island', in which members can 'escape the restraints of historical time and place'[10] (Miles, 1964, p. 457). As such, socially, physically and temporally insulated TOs, bereft from history and context, according to Miles, can help to reduce barriers to change (by shearing away the group's preoccupation with 'things as they are'), reduce conflicts and provide a strong protective function. In addition, Miles proposed that a certain degree of closure can help the group gain its 'own identity' (compare social identity theory: Taifel and Turner, 1979), increase mutual support and promote cohesiveness.

Miles's line of argumentation is in many respects similar to the concept Lundin and Söderholm (1995, p. 447) deemed the 'planned isolation' of a TO. They proposed that in the execution phase of a TO, 'the minimization of any disturbance to plans or other threats to the action [is] imperative, [and] achieved by deliberately isolating the organization'. The result is that 'the project should proceed like a train moving at high speed towards the end station without any unwanted stops' (Lundin and Söderholm, 1995, p. 448). It appears, then, that with regard to the functioning of TOs, there is somewhat of a tension between what we would call the open systems stance on the one hand (with an emphasis on embeddedness), and the closed systems stance (with an emphasis on insulation) on the other. We believe that our dynamic view of TOs, based on resource dependencies, offers a potentially viable way of resolving this debate.

Our main argument held that TOs that are strongly embedded in the past and future (more 'open' with regard to functioning) are likely to experience higher discretion over allocated resources, indicative of a higher level of autonomy. By being able to draw upon trust and experience developed in past collaboration, these TOs would expect to receive more leeway to function as a closed system during the execution phase of the project. This leads to a resolution of the embeddedness (open system) versus insulation (closed system) predicament with regard to the functioning of TOs. The seemingly contrasting arguments between these two

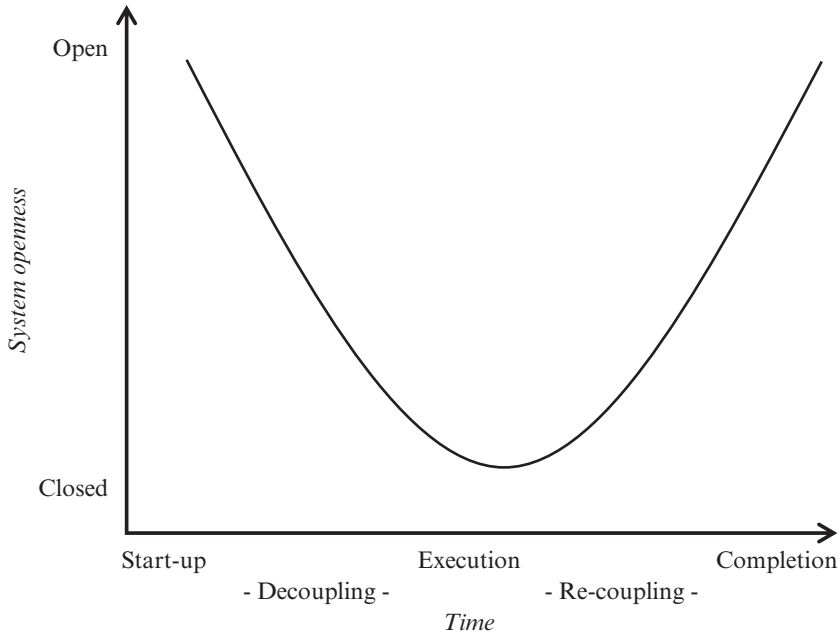

Figure 8.2 A dynamic perspective on TO system openness

might only seem paradoxical when viewed as static. But from a sequential view, the forces may actually be complementary rather than opposing. Specifically, our research implies that because certain TOs are temporally embedded in history and the future (see Engwall, 2003), they are likely to be more autonomous, functioning as a closed system during the execution of the project. This is precisely when a closed system is most helpful for successful task execution (Lundin and Söderholm, 1995; Miles, 1964). At the start-up and completion phases, however, an open system view is most appropriate. These points are graphically illustrated in Figure 8.2, which shows a dynamic perspective on the system openness of a TO throughout its life cycle. In contrast, a static view would only capture one slice of the curve.

As a second implication for theory, our results relate to the work on boundary management of teams and projects (for example Ancona and Caldwell, 1992; Druskat and Wheeler, 2003), by proposing that strategies implementing this approach, such as the 'scouting' and 'isolationalist' strategy of Ancona and Caldwell (1992), might best be viewed over time. In other words, in different phases of a project, different boundary management strategies may be more beneficial: for instance, encouraging

high levels of communication at the beginning and end of the duration of the TO, but adopting an isolationist approach in the execution phase. Exploring the interactions between different boundary management strategies and different phases in the TO life cycle is an interesting area for future research.

Managerial Implications

Flowing from the theoretical suggestions just described, this research effort points to some managerial implications for temporary organizations. These are important because, while there have been a number of suggestions about how to manage external dependence in organizations successfully (for example Kotter, 1979), none of these ideas can be easily tailored to temporary forms of organizing. We propose that when it comes to the successful management of the resource dilemma faced by TOs regarding dependence and autonomy, managers are best advised to see the dilemma as a process with its own dynamic. Following Lundin and Söderholm (1995), the argument put forward in this chapter is that, ideally, TOs need to be embedded in their POs historically, as part of an ongoing collaboration at the PO level. This embeddedness can be fostered in a number of ways, for instance, by selecting the same members for subsequent TOs (assuming reasonable performance), keeping a project portfolio (Turner and Müller, 2003), integrating organizational and project functions and implementing project routines, plus many other hands-on strategies to achieve 'economies of repetition' through repeated projects (Davies and Brady, 2000). By doing this, trust and experience developed in the past can function as a solid foundation on which to grant the TO the necessary amount of resource discretion and autonomy to ensure that it succeeds. This strategy will also enable the TO to reap the benefits of insulation, such as the ability to develop its own identity and to provide TO members with the protective environment needed to ensure that tasks can be executed without distraction.

After the project is finished, a phase of 'bridging' (Lundin and Söderholm, 1995) needs to take place, to re-embed the TO into the non-temporary context. One potentially successful way of doing this is by having formal evaluations in place, as this is an excellent way to transmit experiences (Lundin and Söderholm, 1995). Bridging will help to avoid the loss of knowledge after the TO is terminated, by helping to ensure that past learning will be retained by and inserted into the non-temporary organizational environment, so that it can be drawn upon for subsequent projects. In this way the POs get (re)attached to the TO for future sequences of activity, completing the sequential dynamic of openness versus closure of the TO with regard to its history and context.

It is important to note that as an initial attempt to conceptualize the resource dilemma of TOs as a dynamic process, one limitation of this chapter is that we have oversimplified some of the concepts. With regard to trust, for instance, which provides the logic underlying proposition 1, one could readily add a layer of complexity by arguing that TO discretion over resources will be based on some combination of trust relations among the POs and the extent to which each PO trusts the TO. In addition, one might conjecture whether the trust building assumed to take place when temporal embeddedness is high is dependent on stable group membership. When a subsequent TO is formed, different individuals may be involved in TO activities and management. To what extent does trust then erode as TO composition changes, even when the same POs are involved, and to what extent does trust then need to be re-established, both among the set of POs and between POs and TOs? Second, an additional layer of complexity might also, perhaps, be added to the variable of temporal embeddedness. We did not consider how or to what extent our propositions would be moderated when, for instance, some of the partnering POs have already collaborated, thereby building trust, while other POs may be new to the relationship and have not previously collaborated. The situation becomes even more complex when relative resource contributions (for example when one PO invests twice as many resources in the TO as another PO) are taken into account. Third, in this chapter POs are essentially treated as if they were all the same. What happens when there are multiple POs, all having different relations with the TO – some highly dependent, some not dependent; some which expect the relationship to continue, some which do not; some which have worked on a previous project, others which have not and so on? These conditions are likely to be prevalent in real-life TOs and future research should address them. They are, however, beyond the scope of this first inquiry into the resource dilemma of TOs.

As a final point, the ideas presented here are part of an ongoing call for incorporating temporal features into organization theory (for example George and Jones, 2000) and into the fields of resource-related theorizing (Priem and Butler, 2001), with a particular focus on TOs (Engwall, 2003). Based on this conceptual exploration and set of propositions, we hope to have opened the door to empirical examination of the concept of temporal embeddedness, its effects on the resource dilemma and the functioning and performance of TOs more generally. Conducting such research would, in our view, significantly enhance our knowledge of this exciting and important organizational form, especially regarding the impact of time and history on temporary organizing.

NOTES

1. Projects are widely considered to be temporary organizations. See Turner and Müller (2003), Packendorff (1995) and Janowicz-Panjaitan, Bakker and Kenis (Chapter 2, this volume).
2. As an example of why human resource management merits special research attention in TOs compared to other organizations, see Huemann *et al.* (2007).
3. In addition to the temporal context, Engwall (2003) emphazised the spatial (organizational) context.
4. In fact, one of the most significant trends in industrial organization of the last decades has been the unprecedented proliferation of inter-firm collaboration (for example, Grant and Baden-Fuller, 2004; Gulati, 1995; Powell *et al.*, 1996; Samaddar and Kadiyala, 2006).
5. Meaning little or no expectation of future collaboration.
6. However, see Black and Lynch (2004), whose work did not support this conclusion.
7. At the same time, we should note that a higher degree of discretion over resources on the part of the TO will not necessarily lead to higher performance on the part of the POs.
8. Engwall uses the term 'project', which we consider TOs to be (see Packendorff, 1995; Turner and Müller, 2003).
9. Engwall's main intent is that TOs be *studied* as open systems. Our discussion here focuses on how TOs *function* as either open or closed systems.
10. Notice how Miles's 'escape from time and space' is directly juxtaposed to Engwall's call to 'conceptualize projects in history and context', and the contrast between the 'no project is an island' metaphor and the concept of 'cultural islands' popularized by Lewin (1947).

REFERENCES

Al-jibouri, S. (2002), 'Effects of resource management regimes on project schedule', *International Journal of Project Management*, (20), 271–277.

Ancona, D.G. and D.F. Caldwell (1992), 'Bridging the boundary: External activity and performance in organizational teams', *Administrative Science Quarterly*, **37** (4), 634–665.

Angling, M. (1988), 'Resource planning and control in a multiproject environment', *International Journal of Project Management*, **6** (4), 197–201.

Atkinson, R. (1999), 'Project management: Cost, time and quality, two best guesses and a phenomenon, its time to accept other success criteria', *International Journal of Project Management*, **17** (6), 337–342.

Axelrod, R. (1984), *The evolution of cooperation*, New York, US: Basic Books.

Barney, J. (1991), 'Firm resources and sustained competitive advantage', *Journal of Management*, **17** (1), 99–120.

Barney, J. (1996), 'The resource-based theory of the firm', *Organization Science*, **7** (5), 469.

Bechky, B.A. (2006), 'Gaffers, gofers, and grips: Role-based coordination in temporary organizations', *Organization Science*, **17** (1), 3–21.

Black, S.E. and L.M. Lynch (2004), 'What's driving the new economy? The benefits of workplace innovation', *The Economic Journal*, **114** (493), 97–116.

Bourgeois, L.J. (1981), 'On the measurement of organizational slack', *Academy of Management Review*, **6** (1), 29–39.

Cleland, D.I. and H. Kerzner (1985), *A project management dictionary of terms*, New York, US: Van Nostrand Reinhold.
Cohen, S.G. and G.E. Ledford (1994), 'The effectiveness of self-managing teams: A quasi-experiment', *Human Relations*, **47** (1), 31–62.
Das, T.K. and B. Teng (1998), 'Between trust and control: Developing confidence in partner cooperation alliances', *Academy of Management Review*, **23** (3), 491–512.
Davies, A. and T. Brady (2000), 'Organisational capabilities and learning in complex product systems: Towards repeatable solutions', *Research Policy*, **29** (7–8), 931–953.
Druskat, V.U. and J.V. Wheeler (2003), 'Managing from the boundary: The effective leadership of self-managing work teams', *Academy of Management Journal*, **46** (4), 435–457.
Dvir, D., Raz, T. and A. Shenhar (2003), 'An empirical analysis of the relationship between project planning and project success', *International Journal of Project Management*, (21), 89–95.
Dzeng, R. and K. Wen (2005), 'Evaluating project teaming strategies for construction of Taipei 101 using resource-based theory', *International Journal of Project Management*, (23), 483–491.
Eisenhardt, K.M. (1989), 'Agency theory: An assessment and review', *Academy of Management Review*, **14** (1), 57–74.
Engwall, M. (2003), 'No project is an island: Linking projects to history and context', *Research Policy*, **32** (5), 789–808.
Engwall, M. and A. Jerbrant (2003), 'The resource allocation syndrome: The prime challenge of multi-project management?' *International Journal of Project Management*, (21), 403–409.
Ernst, H. (2002), 'Success factors of new product development: A review of the empirical literature', *International Journal of Management Reviews*, **4** (1), 1–40.
George, J.M. and G.R. Jones (2000), 'The role of time in theory and theory building', *Journal of Management*, **26** (4), 657–684.
Gerwin, D. and L. Moffat (1997), 'Withdrawal of team autonomy during concurrent engineering', *Management Science*, **43** (9), 1275–1287.
Gower, D. (1983), 'Resource management: The conflict between ongoing operations and project activities', *International Journal of Management Reviews*, **1** (3), 160–162.
Grabher, G. (2004), 'Temporary architectures of learning: Knowledge governance in project ecologies', *Organization Studies*, **25** (9), 1491–1514.
Grant, R.M. (1991), 'The resource-based theory of competitive advantage: Implications for strategy formulation', *California Management Review*, **33** (3), 114–135.
Grant, R.M. and G. Baden-Fuller (2004), 'A knowledge accessing theory of strategic alliances', *Journal of Management Studies*, **41** (1), 61–84.
Gulati, R. (1995), 'Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances', *Academy of Management Journal*, **38** (1), 85–112.
Gulati, R. (2007), *Managing network resources*, New York, US: Oxford University Press.
Heide, J.B. and A.S. Miner (1992), 'The shadow of the future: Effects of anticipated interaction and frequency of contact on buyer-seller cooperation', *Academy of Management Journal*, **35** (2), 265–291.

Huemann, M., Keegan, A. and J.R. Turner (2007), 'Human resource management in the project-oriented company: A review', *International Journal of Project Management*, **25**, 315–323.
Jacobs, D. (1974), 'Dependency and vulnerability: An exchange approach to the control of organizations', *Administrative Science Quarterly*, **19**, 45–59.
Jensen, M. (1983), 'Organization theory and methodology', *Accounting Review*, **56**, 319–338.
Jensen, M. and W. Meckling (1976), 'Theory of the firm: Managerial behavior, agency costs, and ownership structure', *Journal of Financial Economics*, **3**, 305–360.
Katz, J. and W.B. Gartner (1988), 'Properties of emerging organizations', *Academy of Management Review*, **13** (3), 429–441.
Kerzner, H. (1994), 'The growth of modern project management', *Project Management Journal*, **25** (2), 6–8.
Kotter, J.P. (1979), 'Managing external dependence', *Academy of Management Review*, **4** (1), 87–92.
Lewin, K. (1947), 'Frontiers in group dynamics', *Human Relations*, **1**, 5–41.
Lundin, R.A. and A. Söderholm (1995), 'A theory of the temporary organization', *Scandinavian Journal of Management*, **11** (4), 437–455.
Meyerson, D., Weick, K.E. and R.M. Kramer (1996), 'Swift trust and temporary groups', in R.M. Kramer and T.R. Tyler (eds), *Trust in organizations: Frontiers of theory and research*, Thousand Oaks, US: Sage, pp. 166–195.
Miles, M.B. (1964), 'On temporary systems', in M.B. Miles (ed.), *Innovation in education*, New York, US: Teachers College, Columbia University, pp 437–490.
Packendorff, J. (1995), 'Inquiring into the temporary organization: New directions for project management research', *Scandinavian Journal of Management*, **11** (4), 319–333.
Penrose, E. (1959), *The theory of the growth of the firm*, New York, US: Wiley.
Pfeffer, J. and G. Salancik (1978), *The external control of organizations*, New York, US: Harper and Row.
Porter, M. (1980), *Competitive strategy*, New York, US: Free Press.
Powell, W.W., Koput, K.W. and L. Smith-Doerr (1996), 'Inter-organizational collaboration and the locus of innovation: Networks of learning in biotechnology', *Administrative Science Quarterly*, **41** (1), 116–145.
Priem, R.L. and J.E. Butler (2001), 'Is the resource-based "view" a useful perspective for strategic management research?' *Academy of Management Review*, **26** (1), 22–40.
Samaddar, S. and S.S. Kadiyala (2006), 'An analysis of interorganizational resource sharing decisions in collaborative knowledge creation', *European Journal of Operational Research*, **170** (1), 192–210.
Scarbrough, H., Swan, J., Laurent, S., Bresnen, M., Edelman, L. and S. Newell (2004), 'Project-based learning and the role of learning boundaries', *Organization Studies*, **25** (9), 1579–1600.
Stewart, G.L. (2006), 'A meta-analytic review of relationships between team design features and team performance', *Journal of Management*, **32** (1), 29–54.
Taifel, H. and J.C. Turner (1979), 'An integrative theory of intergroup conflict', in W.G. Austin and S. Worchel (eds), *The social psychology of intergroup relations*, Monterey, US: Brooks/Cole, pp 33–47.
Thamhain, H.J. (1990), 'Managing technologically innovative team efforts toward new product success', *Journal of Product Innovation Management*, **7**, 5–18.

Turner, J.R. and A.E. Keegan (2001), 'Mechanisms of governance in the project-based organization: The role of the broker and steward', *European Management Journal*, **19** (3), 254–267.
Turner, J.R. and R. Müller (2003), 'On the nature of the project as a temporary organization', *International Journal of Project Management*, **21** (1), 1–8.
Wall, T.D., Kemp, N.J., Jackson, P.R. and C.W. Clegg (1986), 'Outcomes of autonomous workgroups: A long-term field experiment', *Academy of Management Journal*, **29** (2), 280–304.
Wernerfelt, B. (1984), 'A resource-based view of the firm', *Strategic Management Journal*, **5**, 171–180.
Yuchtman, E. and S.E. Seashore (1967), 'A system resource approach to organizational effectiveness', *American Sociological Review*, **32** (6), 891–903.