

# The Project Manager and the Project-Network

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## Abstract

This paper draws on a qualitative study to increase understanding of what project managers do, and how project managers understand and talk about what they do. It includes insights from in-depth analysis of interviews with a nominal group of project managers. However, rather than use competence frameworks to bring out the network of relationships between the project manager and the multiple political, environmental and technological factors in any project, concepts from Actor-Network Theory are used to interpret the stories told by experienced project managers about their work and their use of project management techniques against the fluid and transient nature of projects. The paper shows how project management processes act as allies, enabling the project manager to interest and enrol team members and stakeholders and to mobilise the support of sponsors and other powerful players.

## Actors, Networks and Projects

Although project management has traditionally been associated with 'hard' technology developments, key writers have long identified the project manager as one drawing together human, natural and technological resources in a dynamic but temporary organisation to deliver ends that include the social as well as the technological (e.g. Turner, 1993 p8).

*"Project management was designed to provide sustained, intensified, and integrated management of complex ventures and to pull together a combination of human and non human resources into a temporary organisation to achieve a specified purpose."*

Adams and Barnt, 1988

Put crudely, there have been two different perspectives on project management. The first emphasises methodologies, tools and techniques which reflects the discipline's background in engineering and management science (e.g. PMI, 2000). At the extreme this approach rejects, as ineffective and flawed, the second, which in effect portrays the project manager as a hero by whose skills and actions the successful project is delivered (e.g. Cleland, 1995; Pettersen, 1991).

Proponents of the school of the sociology of scientific knowledge known as Actor-Network Theory (ANT) would include in actor-networks as well as the human actors other natural and technological agents (i.e. living organisms (Callon, 1986) and human inventions (Law, 1986; Latour, 1988)). The metaphor of the heterogeneous network is used to suggest that "society, organisations, agents and machines are all effects generated in patterned networks of diverse (not simply human) materials." (Law, 1992) A network is not a structure — where it is assumed that specific nodes are guaranteed — but a process, perhaps a script (Law, 1997). However, the metaphor script suggests a writer: if one exists then it is an involved actor who is seeking to write it on behalf of other actors — who may also want to write their own scripts.

While networks are composed of heterogeneous actors, actors are also the effects of networks. The network acts as a single block and therefore the action and its actor are seen in its place (Law, 1992). Thus we might speak of BMW selling Rover or Richard Branson bidding to run the UK lottery. Neither BMW nor Richard Branson in this context is a single actor but a network of people and technology. If deprived of the network of secretaries, subordinates, management information, well-furnished office, computer etc. that supports him, how competent would a CEO be? (Law, 1996)

A project too is composed of human, technological and natural actors which are not readily controllable by another actor: they may be brought under control but they are may break lose. In what ANT calls translation (Callon, 1986) one actor or group succeeds in enrolling and mobilising the others into a network s/he has defined. ANT tries to explain "how a few obtain the right to express and to represent the many silent actors of the social and natural worlds they have mobilised."

Despite the emphasis on actors as networks (e.g. Newton, 1996), the ANT actor as conceived by Latour (1999) and Callon (1999) is an individual. Chua (1995) states that ANT does not depict actors as devoid of intentions and it uses the concept of goal-directed action to help explain why actors relate to a set of constructed facts in particular ways. Law (1996) points out that although the manager is the effect of a network of social and technical relations, he can make his own decisions. Latour (1993a) has argued that it is right to ask what the great men of science and history personally contributed to the movements with which they have been identified: he believes that there was a contribution since they prevailed where other individuals and movements did not, but that contribution did not prevail alone but by the confluence of many interested parties. Callon (1999) also sees the actor's behaviour at least in part as determined by the larger network: in a network of pure scientific mobilisation or in an economic market network the actor may manifest as self-directed, selfish, self-aligning but in other contexts s/he could be generous and altruistic. He notes that "ANT has often been criticised for presenting actors guided by the quest for power and solely interested in spreading networks and their influence." This paper argues that this makes it eminently suitable for the study of project managers.

### **The Research Process**

Since competence studies review either the knowledge, skills and attributes (Gonczi et al, 1990) or the behaviour of individuals (Boyatzis, 1982) or both (Finn, 1993), which enable them to succeed, the research into the competence of project managers was the starting point for this study (e.g. Crawford 2000; Gadeken, 2000). Twenty project managers were interviewed individually using the critical incident/behavioural event approach (Flanagan, 1954; Boyatzis, 1982) to focus the conversation on events where they felt they had achieved success or encountered problems in their recent projects. They were also asked to identify characteristics they considered important for project managers. In ANT terms, Latour (1999) says we have to learn from actors themselves "not only what they do but how and why they do it." Three projects were also reviewed in their entirety by observation, interviews with participants and review of their documentation.

The project managers came from seven UK organisations (all but one publicly quoted): all functional as opposed to project based; two retailers, one transport provider and four in financial services. Interview data was transcribed and sorted to identify behaviour and characteristics exhibited by the project manager and then further analysed to create a picture of how project managers behave from an actor-network perspective. Names have been disguised here.

### **Describing Project Managers**

#### **Drawing things together**

Classic ANT texts (e.g. Callon, 1986) describe the processes of network creation in terms of problematisation (seeking to become indispensable to others by defining their interests in the project context), intersement (engaging their attention by building devices which can be placed between them and other influences), enrolment (locking them in) and mobilisation (getting them to act on behalf of the project). The process is fragile: the other actors may break away unless the network is constantly re-performed and reinforced.

Wherever possible the project manager problematises or scopes the project in his/her own terms. Especially those brought in late to a project go first to the sponsor and then to other stakeholders to find out not only what each individual or group wants but also what they can offer in terms of resources, skills and power-bases:

*"My problem was: how do I get these people to work together? How do I set an agenda that they will feel is acceptable to them? ... I interviewed them all individually; I wrote a terms of reference which was the common view, and then said we'd walk through it at the meeting. I chaired the meeting, even though some of them really didn't want me to, but I did it anyway."*

Robert, Illustrious Bank

Robert claims that the terms of reference which he produced are the common view: yet he wrote them himself after meetings without witnesses as to what was said.

Project documentation is an interestment and enrolment device: as the project plan and the project management plan are developed the sponsor, steering committee, team members and other contributors slot into their roles and sign up to their responsibilities. In an organisation unfamiliar with projects this structure does not already exist and the project manager has to create it. S/he must convince the sponsor or other line managers with a given powerbase in the routine organisation that this structure is necessary. Where a project management methodology has already been adopted by the organisation the project manager can build on a taken-for-granted concept (what Latour called a black box (1987)): people are less likely to question the need for an accepted project structure.

Gaining acceptance of project structure may be marginally easier than instituting project processes. Whereas an operational manager may inherit processes, a project manager has to re-create the processes for each new project. In routine operational tasks the activities may not have to be documented because everyone who needs to already knows about them. Line managers contributing to a project may therefore resent the documenting and reporting processes needed to manage a project. The project managers made life easier for them by setting up easily completed project processes, collecting data orally him/herself and collating it, thus re-inforcing the centrality of his/her position. Where project resources are drawn from the functional departments of an organisation the project manager seeks to increase their identification with the project which implies a loosening of ties with their line manager.

It is easier to enrol full time project staff: the project manager may be able to recruit them directly and order their efforts through the normal processes of target setting, performance measurement, etc – all of which are black boxed in the organisation. But a stronger enrolment is sought and obtained through exhortation to work hard for the project followed by celebration of achievements. This is not normal in many functional organisations and the project managers had to manipulate the budgets, hiding away celebration funds.

The project manager is dealing with the representatives of other networks of people and other resources. They form a chain of intermediaries which allow the project manager to act at distance, to effect changes and to claim to represent everyone affected. Outside there will be other stakeholders, other actors seeking to exert influence on the project.

A strategy commonly quoted by project managers is to mobilise the sponsor to speak and act on behalf of the project. The project manager creates processes which provide the sponsor with good information (which may not be the same as comprehensive information) which allows him/her to look good and speak confidently at Steering Committees or Board meetings.

*“The progress report itself would take a number of forms. There would be a summary report that he would submit in bullet form to the steering committee without the verbiage, and there would also be a backing briefing for him to give the details should it be required. It would be accompanied with a brief but comprehensive appendices should he want more information, so that I projected an image of a) being in control and b) being able to effectively communicate whilst c) allowing him to go in extremely confident to any meeting that he wanted to go into.”*

Lawrence, Illustrious Bank

Time, together with cost and quality, is one of the three management areas traditionally associated with project management. The project managers created their own time, punctuated by deadlines and milestones, measured in effort-days, so that time passed with reference to internal project events, placing the measurement of time between the project team members and the rest of the organisation.

The project manager has to maintain the network and maintain the project plan, monitoring for slippage in time, cost and quality but also for underlying slippage in commitment, breakdown in representation and even betrayal (“traduction/trahison”, Law, 1997). It seems likely that managing projects takes more effort in functional organisations without a pre-formed understanding of project management than in project based organisations, or in functionally based organisations which have embedded the disciplines of project management.

A project network needs constant maintenance. The moments of problematisation, interestment, enrolment and mobilisation are not just part of the project initiation and establishment. Throughout

the project they, together with the processes of monitoring and reporting, are repeated thus reinforcing the network. The more the project manager can persuade people that 'this is the way we manage this project' (or even 'this is the only way to manage a project'), the greater the strength of the project-network. Maintenance work takes its toll on the project managers who work long hours, trying to meet people face to face where they can have greater impact, and listening out for dissidence.

Law and Singleton (2000b) describe the process of building a network as a performance. Successful performances cannot be built out of nothing. Raw materials have to be put and held in place; allies have to be cajoled, seduced, bought or forced to play the roles allocated to them. It is not enough to pick them off one by one: to pick any off you have to have most of the others already lined up — *"they all have to perform together and if they don't, if any one bunch of actors goes off script then the network holding all the others in place is also disrupted and they are in danger of going native."*

### **Human and non-human actors**

The other human actors include team members, sponsors, steering groups, users, people who would be inconvenienced by the project, the directors of the organisation and any others who could be described as project stakeholders. The composition and constitution of these elements of the project structure were of key importance to the project managers because in-fighting and factions could pull the project apart, countering the project manager's efforts to draw it all together. Given the powerful position of the directors in an organisation the project managers were very aware of the need to establish positive communications with them whatever their relationship to the project.

Defining the boundary of the project-network too narrowly on the one hand simplifies the work of the project manager and on the other opens up a risk of invisible others working to undermine the project — partly because they do not know it exists. Stakeholder analysis is a formal project management tool but, as Bonke and Winch (2000) illustrate, the project as an actor-network can go beyond the obvious power-bases. Henry, a project manager with Transport Provider, talked about tourists affected by closing a railway line. The tourist board claims to speak on behalf of the tourists: ways of informing them of the closure and alternate routes are debated. But the engineers are not convinced: the tourist board does not control the tourists, it has not asked them what they will do. Despite their economic importance to the city, the tourists' wishes and future actions remain unknown to Henry and information leaflets are not distributed to the hotels.

Much of early ANT is concerned with the acceptance of new scientific ideas to the extent that they become the orthodoxy (Latour, 1987) and their effects are irreversible. This becomes the case when they are reflected in other processes such as the law (e.g. food hygiene laws which reflect scientific knowledge of micro-organisms) and in material embodiments (e.g. the standard gauge of railways which dictates the dimensions of rolling stock, railway bridges, and reputedly solid fuel booster rockets). If we accept that it is possible and desirable to entertain the idea that the project deliverables can themselves be seen as actors (Law, 1992) then they too can influence the cohesion or break up of the project. A project is initiated to deliver tangible objects (e.g. a retail warehouse) and less tangible ones (e.g. a home delivery process). Each tangible element here exerts influence on future decisions: the height of the building affects the height of the racking; the capacity of vehicles affects delivery scheduling.

The project also has to create itself and maintain itself for the time needed to effect delivery. Constructed of a number of actors from different groups inside and outside the organisation, the project craves embodiment: a code name, a project room, a logo, t-shirts — these are peripherals — the core is the project documentation, offspring of the methodology which connects it to the larger network of professional project management: allies of the project manager. The documented plans and charts are actors created by the project manager, which have strength drawn from their life as texts (Gergen, 1999, p80), separate from him/her. One project manager, Owen (Illustrious Bank), described using the project plan as taking "a look down the river," looking into the future to see what would or would not work (as in Law, 1996).

Callon (1986) used the term *obligatory passage point* to describe a location in a network through

which other actors are obliged to pass. This implies that it contributes to the ordering of the network and is in some sense the centre of the network. There are several candidates for this location in a project: the project manager, the steering group, the project sponsor, the project plan and the project support office but the project managers interviewed saw themselves in the role (of heroes?). Owen described it:

*"I drew all that together, created a master plan and measured their progress at these weekly team meetings... They reacted to me personally and I was immediately acknowledged as somebody who'd been in projects before just by introducing things like structured tasks and activities and milestones."*

Possibly the centre of a project-network is a hybrid (an association between two or more entities that are heterogeneous, human and non-human (Latour, 1993b)): the project manager and the project plan together. A project manager who finds that something is going on in his/her project that s/he does not know about is angry with others for their dissidence and with him/herself for failing to read the network, to act in time – as for example Nick (Illustrious Bank): *"I felt slightly disappointed in myself. I believe that a project manager should always be watching. ... I knew these sort of things would be happening.... And it caught me slightly on the hop."*

### Conclusion

Whereas project management methodologies emphasise the right structures and processes to follow and competence studies look within the individual to explain ability to act in terms of knowledge, skills and attitudes, often only outwardly visible as behaviours, ANT looks at the human and non-human actors and alliances which the individual draws together and mobilises to perform a temporary social organisation. This perspective emphasises interplay between the project manager and the methodology; the power of project manager tools to place and keep the project manager at the centre of the project; and the need for constant re-inforcement to keep the project organisation together as well as the project on track. In one sense it is a move away from the project manager as hero; in another it emphasises way the project manager performs the project, creates and recreates it like the steps of a dance.

Adding a project manager to a project (not uncommon: organisations do not know how early they should initiate a project, and the project manager is often brought in late) is like introducing a sheep dog to a field full of wandering sheep: s/he comes with a sense of purpose, a desire to create order, a greater insight into where everyone should be going – the last derived from the shepherd's instructions. But let us not take the analogy too far: the project manager does not need to be instructed by whistles at frequent intervals and like the latest fire-and-forget missiles the project manager comes with an in-board guidance system.

This is the project manager's competence. Each project manager is the effect of an actor-network of all the human and non-human elements which go to make up that competence. So the knowledge of project management tools and techniques is built upon and enhanced by the managerial skills (such as running meetings, conducting appraisals), personal skills (listening, questioning etc) and learning skills (reflecting, planning, doing and more reflecting (as per Schön, 1983; 1987)). But the project manager is also competent by virtue of his/her participation in the network of project management professionalism, a counterweight to operational management practice (Eraut, 1994) which strengthens the resolve and provides the tools and techniques which are the non-human elements of the actor-network.

The project manager knows that the project-network exists and has learned formal tools and techniques which enable him/her to establish temporary structures and to institute processes, together with the tacit knowledge of how to read the network and how to respond to disturbances in the relationships. It is as if we were looking into a deep pool. At first it seems that the creatures swimming in it are clumsy, splashing around. Then we see one who swims purposefully, who understands the currents and flows: s/he belongs there, it is his/her element. One of Gadeken's (2000) project managers appears to have at least a partial awareness of how he reads the threads and plays the game:

*“Whatever happened, I would just look for a way around it. It was just – it just became a game actually, of trying to unravel all the pressure groups.”*

Latour (1993a, p42) in his examination of the influence exerted by Pasteur on French life distinguishes two mechanisms: the first is how a whole country becomes interested in what happens in Pasteur’s laboratory; the second is how responsibility for their altered understanding of disease becomes attributed to one man. In the management of projects there are similar mechanisms to be distinguished from each other: how the organisation places its trust in a project to deliver innovation; and how it places reliance on one project manager to create that project. Project managers place themselves at the centre of their project stories: they are the heroes with the knowledge and experience you can trust. Yet their performances depend on choreographing the contributions of heterogeneous actors, enrolling them into the dance, away from the steady march of operational roles. What is placed between the contributors and their operational roles is project management itself (what Law and Singleton (2000a) call ‘projectness’): a discipline which has spread from engineering and aims to become accepted as the way to manage all types of innovation in all organisations.

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