



# Megaproject Stakeholder Management

## Document Version

Accepted author manuscript

[Link to publication record in Manchester Research Explorer](#)

## Citation for published version (APA):

Winch, G. (2017). Megaproject Stakeholder Management. In B. Flyvbjerg (Ed.), Oxford Handbook of Megaproject Management (pp. 339-361). Oxford: Oxford University Press.

## Published in:

Oxford Handbook of Megaproject Management

## Citing this paper

Please note that where the full-text provided on Manchester Research Explorer is the Author Accepted Manuscript or Proof version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version.

## General rights

Copyright and moral rights for the publications made accessible in the Research Explorer are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

## Takedown policy

If you believe that this document breaches copyright please refer to the University of Manchester's Takedown Procedures [<http://man.ac.uk/04Y6Bo>] or contact [uml.scholarlycommunications@manchester.ac.uk](mailto:uml.scholarlycommunications@manchester.ac.uk) providing relevant details, so we can investigate your claim.



## Megaproject Stakeholder Management

*Graham Winch*

Manchester Business School

[graham.winch@mbs.ac.uk](mailto:graham.winch@mbs.ac.uk)

To appear in:

B. Flyvbjerg (ed.)

*The Oxford Handbook of Mega-project Management.*

Oxford, OUP

## Abstract

Effective stakeholder management is crucial for megaproject development and delivery, so we provide an extensive review of the project stakeholder management literature. We find that the literature is largely instrumental, rather than descriptive or normative. In particular, it fails to address the stakes of the natural environment and future generations in megaprojects. Drawing on developments in stakeholder management theory in strategic management research, we propose to broaden the agenda to a megaprojects and society perspective and to stress the political, economic, and ethical aspects in the context of an analysis which draws on institutional theory.

## Key Words

Megaproject stakeholder management; megaprojects and society; institutional theory and megaprojects.

I am very grateful to Dr Sandra Schmidt and to Dr Natalya Sergeeva for their help in the preparation of this chapter.

## Introduction

In order to provide a forum for stakeholder voice on the TAURUS project to automate back-office settlement for the London Stock Exchange, the Securities Industry Steering Committee on TAURUS (SISCOT) was established with representation from the key players. At TAURUS' heart was the compulsory dematerialization (replacing paper share certificates with an electronic register of stock ownership) which threatened the perceived interests of brokers acting for private clients who were supported by the industry regulator. This committee included these brokers and provided significant input to the requirements for the TAURUS system, with each stakeholder trying to shape those requirements to meet their particular interests. The result was unmanageable scope creep leading to budget and schedule escalation, and finally to cancellation of the project after £80m (in prices of the day) had been wasted. To those trying to deliver the project, SISCOT became known as the "Mad Hatter's Tea Party" (Drummond, 1996).

The challenges that the TAURUS project team faced in managing their project's stakeholders were immense, and the CREST project that replaced it could only be a success due to a change in project scope that reduced the interest of the regulatory stakeholder and thereby reduced the power of opponents to TAURUS. The aim of this paper is to explore these types of challenges and to propose a research agenda on how stakeholders on megaprojects can be most appropriately managed by balancing the differing and often conflicting claims of various stakeholder groups. We will start by briefly reviewing the development of the managerial literature on stakeholder management over the last 50 years before examining more closely some of the recent research contributions to project stakeholder management. We will then turn to two other intellectual traditions which have generated significant insights into project stakeholder management – actor-network theory and institutional theory. We will conclude by suggesting some new directions for research and practice in project

stakeholder management on the theme of *megaprojects and society* and the ethical considerations that follow.

### Stakeholders in Strategic Management Research

The concept of a corporation's stakeholders in distinction to its share or stockholders who are its legal owners emerged at the Stanford Research Institute during the early 1960s as part of work on strategic planning (Freeman, 1984). These ideas were rapidly picked up in work on strategic management (Ansoff, 1968), project management (Cleland and King, 1968) and elsewhere. For Ansoff, and Cleland and King, stakeholders were part of the corporate "environment" that had to be taken into account in pursuit of its objectives. Freeman developed these insights into a seminal contribution (1984; see also Parmar et al., 2010) on strategic management from which the current literature flows. Freeman argued that strategic management needed to move beyond a production function view, and even a managerial view that takes into account the interests of stockholders and employees, towards a stakeholder view of the firm which takes into account actors such as governments, non-governmental organizations, local communities, suppliers and customers. He also emphasized that the stakeholder "map" of a particular corporation was contingent and could only be described empirically rather than categorically. On this basis, Freeman provided the widely accepted definition of a stakeholder in the literature (1984; 46):

A stakeholder in an organization is (by definition) any group or individual who can affect or is affected by the achievement of the organization's objectives.

As the research inspired by Freeman evolved (Laplume et al., 2008), it developed four main lines of enquiry, which we will use to structure our review of the research in project stakeholder management. These lines of enquiry are:

- *Stakeholder definition and salience* develops concepts and techniques for identifying who the stakeholders are and their relative importance for the successful pursuit of the firm's objectives. Mitchell et al (1997) made a seminal contribution to this line of enquiry, arguing that stakeholder salience is a function of those stakeholders who are relatively powerful, are deemed to be legitimate, and have urgent claims.
- *Stakeholder actions and responses* investigates how stakeholders influence the behaviour of the firm. Frooman (1999) argued that stakeholders use direct strategies when they hold resources upon which the firm depends and more indirect strategies when they do not. Indirect strategies can include campaigning, forming coalitions and networks, and regulatory action.
- *Firm actions and responses* is an area to which Freeman (1984) devoted much effort, and can include corporate social responsibility activities, lobbying government and regulators, and collaborative relationship building.
- *Firm performance* investigates the returns to the firm for investment in stakeholder management capability. Generally, the return is shown to be positive, but the evidence is rather indirect, and not yet convincing.

Laplume and his colleagues (2008) note another trend in the literature with a shift from Freeman's original conception of stakeholder management as an essential part of rational strategic planning towards a view of stakeholder management as an ethical imperative (Gibson, 2000). Yet this imperative poses new challenges because the criteria for evaluating the relative merits of different stakeholders become unclear once the Smithian moral imperative for the firm to make a profit is occluded. Gibson (2000) argues that this problem can be addressed by deploying notions of partiality and reciprocity, so long as stakeholders are identifiable and coherent social groups. However, there are those who advocate the inclusion of natural environment in the stakeholder map as the primordial stakeholder

(Driscoll and Starik, 2004). This is a radical extension to Freeman's definition above, yet the natural environment is both clearly affected by (e.g. pollution, global warming) and affects (e.g. depletion of exploitable natural resources; natural disasters) the firm in the pursuit of its objectives. Driscoll and Starik proposed an extension of the stakeholder saliency framework (Mitchell et al 1997) to include "proximity" to take the natural environment into account.

Stakeholder management as part of strategic management has come a long way since the early sixties, but it does appear to have come to something of an impasse. It is notable that an earlier Oxford Handbook on Strategic Management (Faulkner and Campbell 2003) does not contain a chapter on stakeholder management and only passing reference in the text. Research interest in the strategic management field has moved on, and it is now strongest in the field of business ethics (Laplume et al., 2008). Another field in which there is growing interest in the concept is project and programme management to which we now turn.

### Stakeholders in Project and Programme Management Research

Researchers in project and programme management very soon realized the importance of the concept of stakeholder management (Cleland and King 1968), but this realization did not stimulate a significant research activity. Rather, the topic became a standard chapter in project management handbooks and guides such as Calvert (1995); Cleland (1998); McElroy and Mills (2000); Winch (2004) and, indeed, this current handbook. It has also generated a stand-alone text in Chinyio and Olomolaiye (2010). Recent literature reviews of research on project stakeholder management (Achterkamp and Vos 2008; Littau et al 2010; Mok et al 2015) show that research interest in the topic began to take off around 2005 and has gained momentum since; the latter review is particularly helpful as it is focused on megaprojects. The three reviews together provide a good coverage of the journal-published research literature, but their reliance on bibliographic data bases rather than a deeper understanding of

the literature and its principal contributions has generated some gaps. So our review here will focus on more recent journal-published papers, but also cover earlier contributions published in books. We will structure our review using the categories developed by Laplume and his colleagues (2008).

*Stakeholder definition and salience.*

Miller and Lessard (2000) provide thoughtful insight into the process of “project shaping” on megaprojects whereby the coalition of interests around the front end definition of a megaproject including sponsors, funders, governments, and key suppliers is configured and reconfigured until a viable project concept is defined and gathers sufficient momentum to move into execution. Flyvbjerg et al (2003) further show how the dynamic of relationships between the sponsors of the megaproject and the financiers can create the “megaproject paradox” through the deliberate underestimation of costs and overestimation of benefits i.e. strategic misrepresentation of the investment case for the megaproject. Sallinen et al. (2011) analyse the salience of national government as regulator on a Finnish civil nuclear project. They show how the nuclear regulator has both power and legitimacy. It is the guardian of the safety of nuclear installations which gives it both considerable power (its technical requirements must be met) and legitimacy (civil nuclear would be politically unacceptable without its oversight). These combine to give it urgency as challenges in meeting its requirements are on the project’s critical path. Yang et al. (2014) conducted a survey of projects managers to understand their perceptions of salience. They report that power is most important, followed by urgency and proximity, while legitimacy had little salience for these project managers.

*Stakeholder actions and responses.*

Hughes reported the dynamics of stakeholder engagement on the Boston Central Artery/Tunnel and the aims of representatives of community stakeholders in “delivering



some chunk of mastodon meat back to the tribe”(1998: 221). McAdam et al. (2011) further analyse the factors which generate opposition to pipeline projects in developing countries, distinguishing between legal opposition within existing institutional frameworks and political opposition outside those frameworks. Sallinen et al. (2011) show how the actions of the government’s agent – the nuclear safety regulator – shape the management of the project. Mazur et al. (2014) show that the emotional intelligence of project managers is important for the development of internal and external stakeholder relationships in the defence sector; Vrhovc et al. (2015) explore resistance to IT-enabled organizational change by stakeholders. Turning to construction projects, Collinge and Harty (2014) and Heravi et al. (2015) demonstrate how stakeholder involvement varies by phase of the project. Law and Callon (1992) and Missonier and Loufrani-Fedida (2014) show how the network of stakeholders evolved over time on a jet fighter and IT project respectively.

*Firm actions and responses.*

Winch (2004) shows how reducing the scope of the project (but not the mission) removed the interest of the regulator and thereby significantly reduced the power of one group of opponents to the project mission. Chang et al. (2013) study defence acquisition projects, stressing the importance of value co-creation with suppliers. De Schepper et al. (2014) further show how the use of private finance for public infrastructure projects significantly increases the complexity of project stakeholder relationships. Greiman (2013) shows how the project management team on the Boston Central Artery/Tunnel addressed communication with, and mitigation of, stakeholders. Yang et al. (2014) report that project managers tended to compromise with, or make concessions, to powerful stakeholders, while they tended to use a hold (do nothing) or compromise strategy for urgent stakeholders. Proximate stakeholders tended to be treated more gently. Eskerod and Vaagaasar (2014) show how the owner project management team works through the project lifecycle to build up trusting relationships with

both the senior sponsors of the project and the principal supplier to the project. Beringer et al. (2013) turn attention to portfolio management, and show the importance of internal stakeholders for effective project portfolio management.

*Firm performance.*

Project performance has traditionally been defined in relation to the Barnes (1988) triangle of achievement of time, cost, and quality objectives. Most of the literature on project stakeholder management reviewed here and covered in earlier reviews adopts this definition, if only implicitly, in terms of stakeholders as groups to be managed so that they do not disrupt progress of the project. Thus Greiman (2013) suggests that providing stakeholder mitigations on the Boston Central Artery/Tunnel added 30% to the total cost. However, if we turn to the project performance literature we can see that the debate there has moved on from this narrow definition to consider the different performance criteria espoused by different stakeholders. Taking the perspective of the owner and operator, Merrow (2011) presents regression analyses showing that high “team integration” leads to high project performance where representation of operators in the early phase project team is one of the more importance parameters constituting the team integration index. Authors such as Davis (2014) and Turner and Zolin (2012) show how stakeholders such as suppliers, users, and the project team will likely have differing and often incompatible perceptions of project performance.

*Overview.* This review demonstrates that empirical research on project stakeholder is a vibrant area with growing activity which will support megaproject management practice. Not all research reviewed above is on megaprojects, but even that which is not has relevance for megaproject management. As it developed, the project management field espoused a somewhat narrower definition of stakeholder than that proposed by Freeman (1984), perhaps influenced by Cleland (1986). It is clear from Littau et al. (2010 table A2) that project management researchers typically restricted the definition to those *interested in* the project

rather than those *affected by* the project, implying a higher level of cognition from the stakeholder for inclusion in the analysis. This distinction is important because the former formulation excludes by definition the primordial stakeholder.

Most of the research reviewed here and that covered in the three earlier research reviews upon which this review builds is, therefore, clearly “instrumental” (Donaldson and Preston 1995) in that its premise is that effective engagement with stakeholder interests through either or both communication and mitigation is essential to the successful delivery of the project mission. The balance of the research reviewed which is focused on the project front end of defining the project mission is more “descriptive” (Donaldson and Preston 1995) in that it empirically explores the processes of megaproject front end shaping processes. Donaldson and Preston (1995) conclude their review by arguing that stakeholder management theory cannot rely on either a descriptive or instrumental perspective; rather it needs a “normative” perspective. This is a point to which we will return.

Before we do this, we discuss some limitations to project stakeholder management research. One is conceptual, while the others concern the scope of research on megaproject stakeholder management. The conceptual issue is the problem of the absent stockholder. The fundamental premise of stakeholder theory (Freeman 1984) is that stakeholders are distinguished from stockholders who have a fiduciary claim on the focal organization; the analogous group for public organizations is taxpayers. So, who are the stockholders in a project? Most obviously, they are the financiers of the project. Where the project is financed by the owner organization from internal funds, then the project stockholders are the conventionally defined stockholders in the owner organizations be they holders of equity or taxpayers. However many owner organizations seek non-recourse finance for their megaprojects, and so the project stockholder may have a direct claim on the asset being created by the project and the associated cash flows its exploitation generates (Morrison 2012). Such arrangements on

public projects are called public-private partnerships (Winch and Schmidt in press). However, as we will see below, it is more helpful analytically to treat financiers of projects as a special type of stakeholder rather than a contrasting stockholder in project stakeholder management.

A related issue is the precise definition of the focal organization for the stakeholder analysis. As Davis (2014) demonstrates, some studies include the project manager or project team in the analysis; others include the owner, client, or top management. For Freeman (1984) the “focal organization” is the firm, although he notes that this presumes consensus within that organization. He therefore recommends a pragmatic approach to focal organization definition depending on the details of the situation. By analogy, the focal organization would be the owner organization as defined by Winch (2014) which raises the capital for the investment in the project, “owns” the asset generated by the project, and goes on to exploit it for beneficial use to provide a return to the investors. However, this is counter-intuitive from a project management point of view; surely the focal organization should be the temporary project organization? Yet the temporary project organization is a diverse coalition of interests (Winch 2014) and consensus certainly cannot be assumed, so much analytic power would be lost by this definition. An additional problem is that during front end definition there is often not a project organization as such and its formal establishment is an *outcome* of the shaping process by stakeholders – Cochrane et al (2002); Cusin and Passebois-Ducros (in press), and Hughes (1998) all show how projects emerge from interactions between urban elites and are profoundly shaped before an “owner” organization is identified to manage the project.

We propose, therefore, to shift to a slightly more abstract level of definition and suggest that the *project mission* (Winch and Bonke 2002) be the focal point of stakeholder analysis, where the project mission is defined as the overall intent of the megaproject as a value proposition. This is distinguished from the project scope which is that total set of activities required to

achieve the project mission. While this is a development from Freeman's definition, it has two advantages. It allows stakeholder analysis during the project shaping phase when there may not be a focal organization as such but there is a clearly emerging mission, and it is future-oriented in that the focal point of concern for stakeholders, including financiers, is often something that may not physically exist for many years hence. We therefore propose the following definition of project stakeholder:

A project stakeholder is any group or individual who can affect or is affected by the achievement of the project mission.

A second observation from this review is the complete absence of attention paid to the primordial stakeholder. Even Zeng et al (2015) in their review of "social responsibility" on megaprojects mention environmental concerns only in passing, yet for many stakeholder groups environmental concerns are the principal issue with megaprojects. Indeed, Gellert and Lynch (2003: 16) define megaprojects as "projects which transform landscape rapidly, intentionally, and profoundly" and analyse the ensuing primary and secondary "displacements" for both the natural and social environment. Driscoll and Starik (2004) see the natural environment as truly primordial, but we suggest here that the definition can be usefully relaxed to include those pre-existing artefacts valued by society typically captured by the word "heritage" such as ancient buildings and archaeological remains.

Our third observation is that remarkably little attention has been given in the research on project stakeholder management to the distinctive characteristics of government, particularly national government, as stakeholder. Government is easily defined as highly salient and its actions can have profound consequences for the progress of projects (King and Crewe 2013); indeed, few megaprojects can proceed without the formal approval of government. Yet, at best, it lurks in the background of most analyses of project stakeholders. Eskerod and Vaagaasar (2014) mention in passing that the signalling project they studied was more

favoured by politicians than the owners of the rail network who were actually making the investment, and that this gave the project team relative autonomy from senior management, but they do not pursue this line of enquiry further. Similarly, Chang et al (2013) argue that suppliers advocated a nationalistic procurement policy but do not analyse the political dynamics of implementing such a policy.

Only Sallinen et al. (2011) take the role of national government seriously in their analysis in focusing on a particularly important type of stakeholder – regulators. Indeed Merrow *et al* (1981) argued that regulators are the principal source of budget overruns on megaprojects. Regulators for land use are a major factor in shaping all projects which consume spatial resources (Stringer 1995). Economic regulators for utility companies such as in the UK's Regulated Asset Base (Helm 2009) model act at the project portfolio level by agreeing a capital investment plan over the regulatory period – typically five years – consisting of multiple projects and programmes.

Finally, we can observe that there are at least two applications of project stakeholder management concepts in the research literature. The first is descriptive and interested in the front end shaping of megaprojects and how the coalitions of stakeholders are assembled in terms of both incentivizing those who could benefit from the megaproject investment and mitigating the impact on those who could lose from it. The second follows Cleland (1986) and is instrumental in being more concerned with the efficiency and effectiveness of project execution and mitigating the potential for stakeholders to disrupt that. Broadly, but with exceptions, the research journal literature tends to focus on the second problem while the extended case studies presented in the book-length literature tends to focus on the former problem. We argue that we need both contributions in order to fully understand and hence manage stakeholders on megaprojects.

## Extending Project Stakeholder Management Theory

These considerations suggest that some considerable effort needs to be put into extending project stakeholder management theory for megaprojects both empirically and theoretically.

We now turn, therefore to two theoretical approaches from sociology which, we suggest, can help us in this enterprise. The first is actor-network theory; the second is institutional theory.

### *Actor Network Theory and the Primordial Stakeholder*

In his seminal study of attempts to regenerate the scallops of St Brieuc Bay, Callon (1986) argues for a sociology of translation in which human (fishermen, researchers) and non-human (scallops) actors are given conceptual equality in the analysis. Callon's concern is with the sociology of science and so he concentrates analytic attention on the researchers attempting to regenerate the scallop population of the Bay so that fishermen can continue to ply their profitable trade. Actor-network theory (Latour, 2005) has thereby inspired those concerned with the relationship between the natural world and construction projects to adopt this distinctive – and controversial (Hacking, 1999) - theoretical approach to analysis (Sage et al., 2011; 2014; Tryggestad et al., 2013) and to thereby conceptualize various types of fauna as project stakeholders. For instance, Tryggestad et al., (2013) show how the discovery of breeding ponds for a protected species of frog led to a significant reshaping of a housing development project involving considerable interaction between the developers, local government, and environmental campaigners.

Actor network theory has at its core the analysis of technology as a social construct (Latour, 2005), and so analysis could well be extended to other primordial stakeholders (in our extension) in the form of historically embedded technologies such as heritage artefacts. Indeed the theoretical scope can be extended even further because Harvey and Knox (2015) identify the importance of the mountain itself as a stakeholder in a road-building project. This was recognized by the project management team who performed rituals to honour the

mountain, including the hiring of shamans, and the widespread belief that the excavations on the mountain demanded human sacrifice in the form of site accidents and death. It has also been used for the analysis of the dynamics of information systems projects to insightful effect (e.g. Missonier and Loufrani-Fedida 2014; Pollack *et al* 2013). In particular, Law and Callon (1992) analyse the evolving stakeholder network around a failed UK jet fighter project. They argue that the relationship between the global network of external stakeholders and the local network of internal stakeholders needs to be managed with the project management team as the “obligatory point of passage” between the two. The inability of the project team to do this in their case led to schedule and budget escalation and hence cancellation of the project.

#### *Institutional Theory and the Government Stakeholder*

One of the classic contributions to institutional theory (Selznick, 2011) is a case study of a megaproject – the development of the US’ Tennessee Valley through a programme of development of hydroelectric dams and farm effectiveness improvement born in the 1930s New Deal era. Selznick shows how existing institutions shape the programme through “informal coöptation”, while the Tennessee Valley Authority (the government agency charged with the megaproject) used “formal coöptation” of the customers for its electricity by setting up distribution cooperatives. Its aim always was to ensure stability for its programme in coping with its “institutional environment”. While earlier work (often dubbed “old institutionalism”) focused on the persistence of institutional structures, later work (often dubbed “new institutionalism”) focuses more on agency and how institutional structures change and has become the predominant approach in organization theory (Greenwood et al., 2008). Despite this predominance, institutional theory has had relatively little influence in project management research in general and stakeholder management in particular, although there are currently some important lines of development.



The first line is concerned with transnational megaprojects – that is, megaprojects which have significant inputs from outside the country within which they are executed. Different nation states have different institutional systems and these have profound effects in shaping megaprojects executed within their territorial jurisdiction (Scott, 2011). In general terms, the national business system (Whitley, 1992; Winch, 2000) shapes the execution of megaprojects, while differences in the specifics of regulatory systems can trip the unwary supplier causing schedule and budget problems (Sallinen et al., 2011; Syben, 1996). Normative and cultural differences can also have profound effects on project shaping and execution (Fellows and Liu, in press; Winch et al., 2000). Scott (2011) analyses the three distinctive “organizational fields” of potential international stakeholders which has evolved around transnational megaprojects consisting of “global infrastructure players” such as funding agencies such as the World Bank, international non-governmental organizations such as Greenpeace, standards organizations such as ISO, and legal firms in London and New York. He contrasts this with the “host community” organizational field in-country around the particular project, and the organizational field generated by the members of the project organization.

A second body of work has applied institutional theory to public sector IT megaprojects (Currie & Guah 2007; Currie 2012). They define the “organizational field” as the sector which provides the context of the megaproject – in their case the UK healthcare system. They analyse the tendencies towards “institutional isomorphism” amongst the various organizations that make up the organizational field, and also the activities of particular groups – particularly healthcare professionals – which attempt to resist such processes. This leads to an analysis of the “institutional logics” within the field associated with professionalism and managerialism and how these interact to shape the megaproject. They then show how the failure to fully involve particular groups – in particular healthcare professionals – generated

significant delays. From a stakeholder management perspective, the various organizations and groups (e.g. Health Ministry, hospitals, general practitioners, and IT suppliers) that populate the organizational field are the stakeholders and they express their various interests in the project in terms of institutional logics to which they adhere.

### *Megaproject Stakeholder Management Theory*

We have shown how both actor network theory and institutional theory can fill gaps in project stakeholder management theory and practice by enabling more trenchant analysis of different groups of stakeholders – primordial ones for actor network theory and those associated with government for institutional theory. Of course, both theoretical perspectives make much broader claims to contribute to organization theory than these modest contributions, but there is no space to discuss those in this chapter. It should also be noted that that actor-network theory and institutional theory embody rather different ontological claims which, we suggest, cannot be syncretically combined; we need to choose between them.

Perhaps the major difference between the two perspectives is how the social is constructed. Actor-network theory sees the construction of the social as being generated through associations between actors either directly or mediated through non-human “actants” (Latour, 2005). It is this concern to give the non-human equal status in the analysis to the human that the most striking contribution of actor-network theory lies, and is the source of its attraction for those wishing to include the primordial stakeholder in the analysis. Actor-network theory also insists that the actors in the network are constituted through those associations, and do not have a prior definition which is brought to the interactions. Institutional theory, in strong contrast, analyses how pre-existing social relationships – be they regulative, normative or cultural (Scott, 2008) – shape current social relationships. While there is increasing attention being paid in institutional theory to how institutions change through processes concepts such

as “institutional entrepreneurship” and “institutional work” the focus remains on change in some pre-existing social formation. Thus actor-network-theory emphasizes a-historical agency and largely denies structural entities, while institutional theory reinforces the role of the historical structures and has only recently shifted research attention to agency in how those structures change.

From the point of view of stakeholder management theory, a fundamental premise is that stakeholders come to the firm with some sort of prior claim or interest, if only not to be adversely affected by the pursuit of the firm’s objectives (Freeman 1984). So for this reason, actor-network theory would appear to be inappropriate for the development of theory in megaproject stakeholder management. If this argument is accepted, then is there any way that we can retain the important insights that actor-network theory it brings to the analysis of the primordial stakeholder? Yes, there is. In all of the empirical contributions the fauna of concern are given voice by human agents. In the cases, the flora and fauna are only “unruly” because campaigning groups advocate their purported interests. Otherwise, they would simply be obliterated, as happens on projects such as the Three Gorges Dam (New and Xie 2008). On the other hand institutional theory – complemented by social movement theory (McAdam 2011) – does provide conceptual tools for analysing how the claims of particular primordial stakeholders are mobilized and how the claims of others are not.

The analysis of the local and global networks on a project (Law and Callon 1992) has notable similarities to the analysis of the three organizational fields in Scott’s (2011) contribution, although in the latter case the focus on transnational projects means that the global network is split into two elements: the national network in the host country and the truly global network of transnational infrastructure players. Where the actor-network theory approach provides additional insight is in the mapping of the evolution of the relationships between the local and global networks (Law and Callon 1992; Missonier and Loufrani-Fedida 2014), and the

importance of the centrality in the network of the project management team as the “obligatory point of passage” (Law and Callon: 31) between the local and global networks. In their analysis, it was the failure of the prime contractor to establish this position of network broker that played a profound role in the escalation and ensuing cancellation of the project. However, institutional theory can also provide subtle analysis of the evolution of stakeholder relationships as Selznick (2011) shows, and the broker role between sub-networks of stakeholders plays an important part in social network analysis (Burt, 2005).

We therefore conclude that institutional theory provides a valuable foundation for megaproject stakeholder management. To date much of the research in the field has been theoretically eclectic, if not theoretically naive. Just as stakeholder management theory challenged theories of the firm derived from neo-classical economics which see management purely as the agents of stockholders, institutional theory developed from the analysis of government intervention in economic development during a period of weakened belief in market-based solutions in the 1930s (Selznick, 2011). Others have also made the link between institutional theory and stakeholder management (Campbell, 2007). However, organization theory cannot be simply applied to enable managerial action – theories are mediated through tools (Cabantous and Gond, 2011). We therefore now turn to evaluating the various tools available for project stakeholder management.

#### Tools for Managing Stakeholders.

Yang (2014) provides a valuable overview of some of the tools that can be used for stakeholder analysis, concentrating particularly on stakeholder mapping and social network analysis. We will follow this lead by also concentrating on these tools. Freeman (1984) advocated descriptive mapping of stakeholders. Bonke (1996) provided a more analytic approach in his pioneering mapping of project stakeholders, drawing on concepts from

research on the social construction of technology (Pinch and Bijker 1987) which was one of the influences on the development of actor-network theory (Latour 2005). Later combined (Winch and Bonke 2002) with the power/interest matrix (Johnson and Scholes 2002), this mapping approach has a number of advantages. In addition to identifying potential stakeholders and characterizing their relative positions as proponents or opponents of the project mission, it also identifies their interests in the project mission and the potential ways in which their interests in that mission might be aligned positively. Olander and Landin (2005) and Winch (2004) show how this approach can be used to map changing stakeholder relationships through time. A recent development is to apply Covey's (1989) concepts of circle of influence and circle of concern to identify those stakeholders amenable to action by the project team, and those that are not.

The Stakeholder Circle tool (Bourne and Walker 2005; Bourne and Weaver 2010) consists of an attractive graphical presentation generated by proprietary software support by various templates for the developing the identification the stakeholders and assessing their perceived relationship to the project. It is recommended that the mapping exercise is repeated more than once during the life-cycle of the project to ensure the continuing alignment of the identified stakeholders. Many will find the formality of the analysis helpful, but the method does not appear to encourage investigating the motivations behind the various stakeholders' interests in the project and in practice it appears to focus largely on internal stakeholders. It also would appear to be more an execution phase tool than one for understanding stakeholders during project shaping.

Drawing on their extensive experience with group decision support systems for strategizing, Ackermann and Eden (2011) report on stakeholder mapping workshops organized for a variety of clients over a number of years. A particular advantage of the paper is the attention paid to the mapping process which is left largely undescribed in the approaches summarized

above. Following work with paper and post-its, the maps are developed using causal mapping software to capture both the identification of stakeholders and their relative power and interest with respect to the project. The causal mapping software also captures the motivations of various stakeholders, and the potential connections between them. One issue with causal mapping software is that its output can be rather difficult to interpret, but not too much should be made of this – as one participant in a workshop said: ‘I learned most from the argument about where to put them [the stakeholders on the grid]; the the output itself was not much help’ (Ackermann and Eden 2011: 188).

Following the lead of Rowley (1997), researchers concerned with project stakeholder management have applied social network analysis (SNA) to analysing stakeholder relationships. Yang et al (2011) use SNA’s measure of “status centrality” to determine the importance of stakeholders in the network. Yang (2014) compares SNA with the stakeholder circle approach reported above, finding that both are useful for project stakeholder analysis, with the former stronger on identifying relationships between stakeholders, and the latter for prioritising their interests. By far the most sophisticated application of stakeholder management to stakeholder management on construction projects is the work of Pryke showing how the various “networks” (e.g. contractual, instruction; control) on the project overlap and reinforce each other. However his work is limited to the local network of stakeholders who form the “project coalition” of those organizations which are in a contractual relationship with each other.

This review suggests that the stakeholder circle and SNA tools – which as Yang (2014) shows are complementary - are more appropriate for instrumental analysis of the project stakeholder network during execution. This is because they rely on complete identification of

the stakeholder network and the collection of empirical data regarding their aspirations. Another issue with SNA is that a stakeholder showing as an outlier on the network might well be a powerful stakeholder that is being ignored by the project team, such as health practitioners on Connecting for Health, and a highly central stakeholder might be one that is being listened to far too much such as the members of SISCOT on TAURUS. On the other hand, the stakeholder mapping approach, particularly when underpinned by causal mapping, is more appropriate for the descriptive analysis of the organisational and institutional processes of shaping the front end of megaprojects.

#### The Future for Research on Megaproject Stakeholders: Megaprojects and Society

Our discussion of project stakeholder management has been descriptive and instrumental in Donaldson and Preston's (1995) terms, but we promised to turn to the normative aspects. Steurer (2006) argues that stakeholder management research in the strategy literature has been largely replaced by a broader concern for research on business and society. We suggest that the next step for project stakeholder management research is also to develop a *megaprojects and society* line of enquiry to complement the existing descriptive and instrumental approaches. One theme along these lines is the research on "projectification" (Lundin et al 2015) investigating the ways in which social and economic action is increasingly organized in projects, while Van Marrewick (2015) explores cross-cultural aspects. However, there is a much broader set of social concerns around megaprojects which, almost by definition, have profound effects on the society around them.

A first set of concerns is *political*. Megaprojects are often – but not always – the outcome of political processes. Although there is a rationalistic justification for the project rooted in cost-benefit analysis, the real drivers behind the project are political initiatives to which the cost

benefit analyses are shaped. For instance, policy initiatives by government are often implemented through IT megaprojects (King and Crewe 2013). The policy intent is a reform of some aspect of government activity which often makes inaccurate assumptions regarding both the potential for developing new IT systems embedded within larger legacy systems, and time and effort required to develop those systems. In the UK case, we discussed Connecting for Health above; the latest of these highly ambitious policy-change driven projects in the UK to run into considerable difficulties is Universal Credit (NAO 2013; 2014). We need much more research into how policy-change driven megaprojects are shaped through policy processes before they emerge as large-scale programmes and hence as something to be managed as a project.

The work of Harvey and Knox (2015) exposes the influence of another aspect of the politics of megaprojects – systemic corruption at national and regional level in shaping the project both around whether the project would go ahead at all, and around its budget and schedule. They thereby introduce the much broader topic of what might be called the *stakeholders of the shadows* around megaprojects which has been largely ignored in the literature. Corruption is defined by the Global Infrastructure Anticorruption Centre as criminal acts of “bribery, extortion, fraud, cartels, abuse of power, embezzlement, and money laundering” ([www.giacentre.org](http://www.giacentre.org) accessed 16/10/15). One egregious example of this is the Kariba Dam North Power Station project in Zambia (Morrell 1987). By their very nature, stakeholders of the shadows are very difficult to research, and the role of international campaigning organisations such as Transparency International is vital here.

Flyvbjerg and Molloy (2011) argue that strategic misrepresentation is a form of corruption; however, they are not suggesting that strategic misrepresentation is criminal but unprofessional. We would argue that it is a matter of *governance* (Müller 2009); that is, it is about the relationship between the owner organisation and its investment projects (Winch



2014), and more broadly, it is a problem of the relationship between centrally/nationally allocated budgets and devolved project promoters. Molloy and Chetty (2015) show how competition between cities in the context of lax budgetary controls generated a serious misallocation of scarce resources in a developing country - South Africa. Similarly, Reisner (1993) shows how competition between Federal agencies generated investments in dams in the US west that were counter-productive both environmentally and economically. In both the public and private sectors, the response to these governance challenges has been the centralisation of budgetary processes – one well-known public sector example is the Norwegian quality at entry process (Klakegg et al., in press; Samset and Volden, in press). This is also happening in the UK public sector with the establishment of the Major Projects Authority in 2011 (NAO, 2014b).

A second set of concerns is *economic*. Development megaprojects – particularly for providing energy and transportation infrastructure - play a very important role in economic growth. Concern with this contribution has led to an interesting line of argument to the effect that project failures make a vital contribution to economic growth – what Hirschman calls the “hiding hand” (1995) of development projects where “entrepreneurial error” (Sawyer, 1952) has serendipitous consequences. Such authors argue that development megaprojects are so daunting that a cool assessment of costs and benefits would not tempt anyone to go ahead with the project and so that it is only underestimation of costs complemented by *underestimation* of benefits which allows projects to go ahead and thereby yield their long-term benefits. This line of argument reaches its apogee in Hobsbawm’s (1962: 57) argument that

It is hard to deny a grudging admiration even to the most obvious crooks among the great railway builders. Henry Meiggs was by any standards a dishonest adventurer, leaving behind him a trail of unpaid bills, bribes and memories of luxurious spending

along the entire western edge of the American continents, at home in the wide open centres of villainy and exploitation like San Francisco and Panama rather than among respectable businessmen. But can anyone who has ever seen the Peruvian Central Railway deny the grandeur of the concept and achievement of his romantic if rascally imagination?

Much the same could be said of the Canadian Pacific Railway (Cruise and Griffiths, 1988), but Flyvbjerg and Sunstein (in press) are scathing about this line of argument and recommend better cost-benefit analysis (CBA). However the argument for better CBA ignores the widespread critique of CBA for investment appraisal due to its inability to handle convincingly both negative and positive externalities to the direct investment case. Hirschman (1995) reviews some of the early debates, while later commentators have called CBA “nonsense on stilts” (Self, 1970; see also Næss, 2006). Even within the cost-benefit analysis research community, awareness is growing regarding its limitations for capturing all the benefits of megaproject investment (Vickerman, 2007), while there also remain important issues on the cost side of the calculus, particularly the valuation of “natural capital” (Helm, 2015) .

All this means that megaproject investment evaluation and selection is a potentially rich area for research. To date, research has focused on technical improvements to the calculus. This is important, but limited in scope. We do need to know much more about the behavioural aspects of CBA and project selection more generally. We need to understand better how CBA is used in practice, and the extent to which the analytic tools are “performative” (Cabantous and Gond, 2011; Callon, 1998); that is how they socially shape the calculus rather than providing an objective means to calculate. We also need to understand more about how the power relationships within and between agencies shapes appraisal and selection in

megaproject planning (Szyliowicz and Goetz, 1995), and the broader set of power relations in the international construction industry (Linder, 1994).

There is, therefore, much research to be done here, but in doing this research we should be mindful of Keynes' argument as to why "animal spirits" are so important for initiating investment projects of all kinds, including megaprojects:

If we speak frankly, we have to admit that our basis of knowledge for estimating the yield ten years hence of a railway, a copper mine, a textile factory, the goodwill of a patent medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes nothing (1961: 149).

In the light of this pervasive uncertainty, CBA is, arguably, no more than a structured way of making sense about the future rather than a refined project selection tool. While improvements can undoubtedly be made in CBA and investment appraisal tools more generally, megaprojects, in the end, will only actually be initiated if there is also a good dose of animal spirits in the mix which inherently entail the risk of entrepreneurial error - be those entrepreneurs (promoters) in the public or private sectors.

Our final concern is *ethical*. One stakeholder that has not been mentioned in the literature surveyed is *future generations*, whose concerns, almost by definition, lack proximity, urgency, and power, even if they may be strong on perceived legitimacy. The United Nations Sustainable Development Goals of 2015 call, in Goal 9 (of 17), for the development of

quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all  
(<http://www.un.org/sustainabledevelopment/infrastructure-industrialization/>; accessed 26/10/15).

Megaprojects will play a large part in achieving these goals. Megaprojects build up the infrastructure of societies over long periods of time and current generations benefit from the infrastructure investment decisions – be they wise or not – of earlier generations. Current infrastructure projects will be a legacy for future generations, but they will also, inevitably, entail the loss of natural capital. How should those trade-offs be made? Should today's stakeholders such as local residents whose quality of life will be negatively affected by the investment be allowed to deny future generations the benefits of the investment? Or should today's beneficiary stakeholders be allowed to deny the interests of the primordial stakeholders which will generate a real natural capital loss for future generations. We need to engage in much more research about how these trade-offs *should* be made because the tools we presently have such as CBA often lack broad legitimacy and efficacy.

### Concluding Thoughts

In this chapter, we have reviewed the stakeholder management literature from strategy research and its application to the field of project management. We have found that the project management research literature has been largely instrumental in its approach, epitomized by the restriction of the definition of stakeholder to those *interested in*, rather than the broader category of those *affected by* the delivery of the project mission. We also reviewed the more descriptive research on the front end of projects which provides the basis for a more thoughtful literature on the ways in which stakeholders shape the project mission itself. However, both these literatures failed to acknowledge the existence of the primordial stakeholder, so we reviewed the actor-network literature which has pioneered its analysis but we noted that, in practice, the interests of the primordial stakeholder were only taken into account when social movements picked up their interests and so we recommended the merits

of an institutional approach to megaproject stakeholder management. This would also enable researchers to analyse more easily the role of government in megaprojects.

Drawing on recent developments in strategy research, we argued for a more comprehensive perspective on megaproject stakeholder management which we dubbed *megaprojects and society*. This perspective, we suggested, broadens out the analysis to include the *political issues* around corruption, governance, and the role of politics in the promotion and funding of megaprojects. It also includes *economic issues* and the role of the “hiding hand” and “entrepreneurial error” in megaproject funding. Better CBA can help to mitigate these challenges, but we also noted important limitations to the current state of the art in CBA as a megaproject selection technique.

Finally, we raised the *ethical issues* around megaprojects and the importance of seeing future generations as a key player within the megaprojects and society perspective. Megaprojects are, in a very important sense, about short-term costs (say the 10-year horizon) for long-term benefits (say the 50-year horizon). These costs are not only the capital cost of the investment but also include the possible loss of natural capital and the loss of amenity for local stakeholders. The path-dependency around large capital investments also implies that the opportunity costs associated with making the wrong investments are massive multiples of the simple sum of the capital foregone. Many nation states and large corporations are struggling towards new ways of making these kind of inter-generational decisions and so these inherently political processes are also an important part of the research field of megaprojects and society.

## Bibliography

- Achterkamp, M. C., and Vos, J. F. (2008). Investigating the use of the stakeholder notion in project management literature, a meta-analysis. *International Journal of Project Management*. 26, 749-757.
- Ackermann, F. and Eden, C. (2011) Strategic Management of Stakeholders: Theory and Practice. *Long Range Planning*. 44, 179-196.
- Ansoff, H.I. (1968). *Corporate Strategy*. Harmondsworth, Penguin.
- Barnes, M. (1988). Construction Project Management. *International Journal of Project Management*. 6 69–79.
- Beringer, C. Jonas, D. and Kock, A. (2013) Behavior of Internal Stakeholders in Project Portfolio Management and Its Impact on Project Success. *International Journal of Project Management*. 31, 830-846.
- Bonke, S. 1998. The storebælt fixed link: The fixing of multiplicity. London, Le Groupe Bagnolet Working Paper 14. Available at: <http://www.chantier.net/europe.html>
- Bourne, L., and Walker, D. H. (2005). Visualising and mapping stakeholder influence. *Management decision*, 43(5), 649-660.
- Bourne, L. and Weaver, P. (2010) Mapping Stakeholders. In. E. Chinyio and P. Olomolaiye (eds.) *Construction Stakeholder Management*. Oxford, Wiley Blackwell.
- Burt, R.S. (2005) *Brokerage and Closure: An Introduction to Social Capital*. Oxford, Oxford University Press.
- Cabantous, L., Gond, J-P., 2011. Rational decision making as a performative praxis: explaining rationality's Eternal Retour. *Organization Science*. 22, 573–586.
- Callon, M. (1986). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St. Brieuc Bay. In J. Law (ed.) *Power, action, and belief: A new sociology of knowledge*, London, Routledge, 196-223.

- Callon, M. (1998) Introduction: the Embeddedness of Economic Markets in Economics. In M. Callon (ed.) *The Laws of the Markets*. Oxford, Blackwell (1-57).
- Calvert, S. (1995). Managing stakeholders. In: J.R. Turner (ed.) *The Commercial Project Manager*. London, McGraw Hill. 214-222.
- Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review*, 32(3), 946-967.
- Chang, A. Chih, Y-Y. Chew, E, and Pisarski, A. (2013) Reconceptualising Mega Project Success in Australian Defence: Recognising the Importance of Value Co-creation. *International Journal of Project Management*. 31, 1139-1153.
- Cleland, D. I. (1986) Project Stakeholder Management. *Project Management Journal*. 17, 36-44.
- Cleland, D. I. (1998) Stakeholder Management. In : Pinto, J (ed.) *Project Management Handbook*. San Francisco, Jossey-Bass. (55-72).
- Cleland, D.I. and King, W.R. (1968) *Systems Analysis and Project Management* . New York, McGraw-Hill.
- Cochrane, A. Peck, J. & Tickell, A. (2002) Olympic Dreams: Visions of Partnership: In: J. Peck & K. Ward (eds) *City of Revolution: Restructuring Manchester*. Manchester, Manchester University Press. (95-115).
- Collinge, W.H. and Harty, C. (2014) Stakeholder interpretations of design: Semiotic insights into the briefing process. *Construction Management and Economics*, 32, 760-772.
- Covey, S.R. (1989) *The 7 Habits of Highly Effective People*. London, Simon and Schuster.
- Cruise, D. and Griffiths, A. (1988) *Lords of the Line: The Men Who Built the CPR*. Toronto, Penguin.
- Currie, W.L., 2012. Institutional isomorphism and change: the national programme for IT—10 years on. *Journal of Information Technology*. 27, 236–248.

- Currie, W.L., Guah, M.W., 2007. Conflicting institutional logics: a national programme for IT in the organisational field of healthcare. *Journal of Information Technology*. 22, 235–247.
- Cusin, J. And Passebois-Ducros, J. (in press) Appropriate Persistence in a Project: The Case of the Wine Culture and Tourism Centre in Bordeaux. *European Management Journal*.
- Davis, K. 92014) Different Stakeholder Groups and Their Perceptions of Project Success. *International Journal of Project Management*. 189-201.
- De Schepper, S. Dooms, M. and Haezendonck, E. (2014) Stakeholder Dynamics and Responsibilities in Public-private Partnerships: A Mixed Experience. *International Journal of Project Management*. 32, 1210-1222.
- Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review*, 20(1), 65-91.
- Driscoll, C. and Starik, M. (2004) The Primordial Stakeholder: Advancing the Conceptual Consideration of Stakeholder Status for the Natural Environment. *Journal of Business Ethics*. 49, 55-73.
- Drummond, H. (1996). *Escalation in Decision-making; The Tragedy of TAURUS*. Oxford, OUP.
- Eskerod, P. & Vaagaaser, A. L. (2014) Stakeholder Management Strategies and Practices during a Project Course. *Project Management Journal*. 45, 71-85.
- Faulkner, D.O, and Campbell, A. (eds.) (2003) *The Oxford Handbook of Strategy*. Oxford, OUP.
- Fellows, R and Liu, A. (in press). Sensemaking in the cross-cultural contexts of projects. *International Journal of Project Management*.
- Flyvbjerg, B. Bruzelius, N. and Rothengatter, W. (2003) *Megaprojects and Risk : an anatomy of Ambition* Cambridge, Cambridge University Press.



- Flyvbjerg, B. and Molloy, E. (2011) Delusion, Deception and Corruption in Major Infrastructure Projects: Causes, Consequences and Cures. In: Rose-Ackerman, S. and Søreide, T. (eds.) *International Handbook on the Economics of Corruption (vol 2)*. Cheltenham, Edward Elgar (81-107).
- Flyvbjerg, B. and Sunstein, C. R. (in press) The Principle of the Malevolent Guiding Hand: Or, The Planning Fallacy Writ Large. *Social Research*.
- Freeman, R.E. (1984) *Strategic Management; A Stakeholder Approach*. Cambridge, CUP.
- Frooman, J. (1999). Stakeholder influence strategies. *Academy of management review*. 24, 191-205.
- Gellert, P. K., & Lynch, B. D. (2003). Mega-projects as displacements\*. *International Social Science Journal*, 55, 15-25.
- Gibson, K. (2000) The Moral Basis of Stakeholder Theory. *Journal of Business Ethics*. 26, 245-257.
- Greiman, V.A. (2013) *Mega Project Management: Lessons on Risk and Projects Management from the Big Dig*. Hoboken NJ, Wiley.
- Greenwood, R., Oliver, C., Sahlin, K. and Suddaby, R. (2008) (eds) *The Sage Handbook of Organizational Institutionalism*. Sage, London.
- Hacking, I. (1999) *The Social Construction of What?* Cambridge MA, Harvard University Press.
- Harvey, P., Knox, H., 2015. *Roads: An Anthropology of Infrastructure and Expertise*. Ithaca NY, Cornell University Press.
- Helm, D. (2009). Infrastructure investment, the cost of capital, and regulation: an assessment. *Oxford Review of Economic Policy*, 25(3), 307-326.
- Helm, D. (2015) *Natural Capital*. Princeton, Yale University Press.

- Heravi, A. Coffey, V. and Trigunarsyah, B. (2015) Evaluating the Level of Stakeholder Involvement during the Project Planning Processes of Building Projects. *International Journal of Project Management*. 33, 985-997.
- Hirschman, A.O. (1995). *Development Projects Observed*. Washington DC, The Brookings Institution.
- Hobsbawm, E. J. (1962) *The Age of Capital 1848-1875*. London, Weidenfeld & Nicholson.
- Hughes, T.P. (1998) *Rescuing Prometheus: Four Monumental Projects that Changed the Modern World*. New York, Vintage Books.
- Johnson, G., and K. Scholes. 2002. *Exploring corporate strategy*. 6th ed. London: Prentice Hall
- Keynes, J. M. (1961) *The General Theory of Employment, Interest and Money*. London: Macmillan.
- King, A. and Crewe, I. (2013), *The Blunders of our Governments*. London: Oneworld.
- Klakegg, O.J., Williams, T., and Shiferaw, A.T. (in press). Taming the ‘trolls’: Major public projects in the making. *International Journal of Project Management*.
- Laplume, A.O. Sonpar, K. and Litz, R.A. (2008) Stakeholder Theory: Reviewing a Theory that Moves Us. *Journal of Management*. 34, 1152-1189.
- Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Cambridge, CUP.
- Law, J. and Callon, M. (1992) The Life and Death of an Aircraft: A Network Analysis of Technical Change. In: W.E. Bijker and J. Law (eds.) *Shaping Technology/ Building Society*. Cambridge MIT Press, 21-52.
- Linder, M. (1994) *Projecting Capitalism; A History of the Internationalization of the Construction Industry*. Westport CT, Greenwood Press.

- Littau, P., Jujagiri, N. J., & Adlbrecht, G. (2010). 25 years of stakeholder theory in project management literature (1984–2009). *Project Management Journal*. 41, 17-29.
- Lundin, R.A., Arvidsson, N. Brady, T. Ekstedt, E. Midler, C., Sydow, J., 2015. *Managing and Working in Project Society: Institutional Challenges of Temporary Organizations*. Cambridge, Cambridge University Press.
- Mazur, A. Pisarski, A. Chang, A. & Ashkanasy, N.M. (2014) Rating Defence Major Project Success: The Role of Personal Attributes and Stakeholder Relationships. *International Journal of Project Management*. 32, 944-957.
- McAdam, D. (2011) Social Movements and the Growth in Opposition to Global Projects. In: W.R. Scott, R. E. Levitt, and R. J. Orr. (eds.) *Global Projects: Institutional and Political Challenges*. Cambridge, Cambridge University Press. (86-110).
- McAdam, D. Boudet, H.S. Davis, J, Orr, R.J. Scott, W.R. and Levitt, R.E. (2011) “Site Fights”: Explaining Opposition to Pipeline Projects in the Developing World. In: W.R. Scott, R. E. Levitt, and R. J. Orr. (eds.) *Global Projects: Institutional and Political Challenges*. Cambridge, Cambridge University Press (279-309).
- McElroy, B., and Mills, C. (2000). Managing stakeholders. *Gower handbook of project management*, 757-775.
- Morrow E.W. (2011). *Industrial Megaprojects: Concepts, Strategies and Practices for Success*. Hoboken NJ, Wiley.
- Morrow, E. W., K. E. Phillips, and C. W. Myers. 1981. *Understanding cost growth and performance shortfalls in pioneer process plants*. Santa Monica, CA: RAND Corporation.
- Miller, R. and Lessard, D.R. (2000). *The Strategic Management of Large Engineering Projects: Shaping Institutions, Risks, and Governance*. Cambridge MA, MIT Press.

- Missonier, S. and Loufrani-Fedida, S. (2014) Stakeholder Analysis and Engagement in Projects: From Stakeholder Relational Perspective to Stakeholder Relational Ontology. *International Journal of Project Management*. 32, 1108-1122.
- Mitchell, R.K. Agle, B.R. and Wood, D.J. (1997) Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *Academy of Management Review*. 22, 853-886.
- Mok, K. Y., Shen, G. Q., and Yang, J. (2015). Stakeholder management studies in mega construction projects: A review and future directions. *International Journal of Project Management*. 33, 446-457.
- Molloy, E. and Chetty, T. (2015) The Rocky Road to Legacy: Lessons from the 2010 FIFA World Cup South Africa Stadium Programme. *Project Management Journal*. 46, 88-107.
- Morrell, D. (1987) *Indictment: Power and Politics in the Construction Industry*. London, Faber and Faber.
- Morrison, R. (ed.) (2012) *The Principles of Project Finance*. Farnham, Gower.
- Müller, R. (2011) *Project Governance*. In: Morris, P.W.G. Pinto, J.K. & Soderlund, J. (eds.) *The Oxford Handbook of Project Management*. Oxford University Press: Oxford. 297-320.
- Næss, P. (2006). Cost-benefit analyses of transportation investments: neither critical nor realistic. *Journal of critical realism*. 5, 32-60.
- National Audit Office (2013) *Universal Credit; Early Progress*. London, NAO.
- National Audit Office (2014) *Universal Credit; Progress Update*. London, NAO.
- National Audit Office (2014b). *Major projects authority annual report 2012–13 and government project assurance*. National Audit Office, London.

- New, T., & Xie, Z. (2008). Impacts of large dams on riparian vegetation: applying global experience to the case of China's Three Gorges Dam. *Biodiversity and Conservation*, 17, 3149-3163.
- Olander, S., & Landin, A. (2005). Evaluation of stakeholder influence in the implementation of construction projects. *International journal of project management*, 23(4), 321-328.
- Parmar, B. L., Freeman, R. E., Harrison, J. S., Wicks, A. C., Purnell, L., and De Colle, S. (2010). Stakeholder theory: The state of the art. *The Academy of Management Annals*, 4, 403-445.
- Pinch, T. J. & Bijker, W. E. 1987. The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. In: W.E., Bijker., T.P. Hughes & T.J., Pinch (eds.) *The Social Construction of Large Technological Systems*. Cambridge, MA: MIT Press. (17-50).
- Pollack, J. Costello, K. and Sankaran, S. (2013) Applying Actor-Network Theory as a Sensemaking Framework for Complex Organisational Change Programs. *International Journal of Project Management*. 31, 1118-1128.
- Pryke, S. (2012) *Social Network Analysis in Construction*. Oxford, Wiley-Blackwell.
- Reisner, M. (1993) *Cadillac Desert: The American West and Its Disappearing Water*. New York, Penguin Books.
- Rowley, T. J. (1997). Moving beyond dyadic ties: A network theory of stakeholder influences. *Academy of management Review*, 22(4), 887-910.
- Sage, D., Dainty, A., & Brookes, N. (2011). How actor-network theories can help in understanding project complexities. *International Journal of Managing Projects in Business*, 4(2), 274-293.

- Sage, D., Dainty, A., Tryggestad, K., Justesen, L., & Mouritsen, J. (2014). Building with wildlife: project geographies and cosmopolitics in infrastructure construction. *Construction Management and Economics*, 32(7-8), 773-786.
- Sallinen, L. Ahola, T. & Ruuska, I. (2011) Governmental Stakeholder and Project Owner's Views on the Regulative Framework in Nuclear Projects. *Project Management Journal*. 42, 33-47.
- Samset, K., and Volden, G.H. (in press) Front-end definition of projects: Ten paradoxes and some reflections regarding project management and project governance. *International Journal of Project Management*.
- Sawyer, J.E. (1952). Entrepreneurial Error and Economic Growth. *Explorations in Entrepreneurial History*. 4, 199-204.
- Scott, W.R. (2008). *Institutions and Organizations: Ideas and Interests*. Los Angeles CA, Sage.
- Scott, W.R. (2011) The Institutional Environment of Global Projects. In: W.R. Scott, R. E. Levitt, and R. J. Orr. (eds.) *Global Projects: Institutional and Political Challenges*. Cambridge, Cambridge University Press. 52-85.
- Self, P. (1970) "Nonsense on Stilts"; Cost-benefit Analysis and the Roskill Commission. *The Political Quarterly*. 4, 249-260.
- Selznick, P. (2011). *Leadership in administration: A sociological interpretation*. New Orleans LA, Quid Pro Books.
- Steurer, R. (2006) Mapping Stakeholder Theory Anew: From the 'Stakeholder Theory of the Firm' to Three Perspectives on Business-Society Relations. *Business Strategy and the Environment*. 15, 55-69.
- Stringer, J. 1995. The planning enquiry process. In *The commercial project manager*, ed. J. R. Turner. London, McGraw-Hill.

- Syben, G. (1996) *Learning the Rules of the Game Abroad: The Case of Friedrichstadtpassagen* 207. London, Le Groupe Bagnolet Working Paper 15. Available at: <http://www.chantier.net/europe.html>
- Szyliowicz, J.S. and Goetz, A.R. (1995) Getting Realistic About Megaproject Planning: The Case of the Denver International Airport. *Policy Sciences*. 28, 347-367.
- Tryggestad, K., Justesen, L., & Mouritsen, J. (2013). Project temporalities: how frogs can become stakeholders. *International journal of managing projects in business*, 6(1), 69-87.
- Turner, R. J. & Zolin, R. (2012) Forecasting Success on Large Projects: Developing Reliable Scales to Predict Multiple Perspectives by Multiple Stakeholders over Multiple Time Frames. *Project Management Journal*. 43, 87-99.
- Van Marrewijk, A. (ed.) (2015) *Inside Megaprojects: Understanding Cultural Practices in Project Management*. Copenhagen, CBS Press.
- Vickerman, R. (2007). Cost-benefit analysis and large-scale infrastructure projects: state of the art and challenges. *Environment and Planning B: Planning and Design*. 34, 598.
- Vrhovec, S.L.R, Hovelja, T. Vavpotič, D. & Krisper M. (2015) Diagnosing Organizational Risks in Software Projects: Stakeholder Resistance. *International Journal of Project Management*. 33, 1262-1273.
- Whitley, R. (1992). *Business Systems in East Asia: Firms, Markets, and Societies*. London, Sage.
- Winch G. M. (2000) Construction Business Systems in the European Union: Editorial Introduction *Building Research and Information* **28**, 88-97.

- Winch, G. M. (2004). Managing Project Stakeholders. In: Morris, P. W. G. and Pinto, J. K. (eds.) *The Wiley Guide to Managing Projects* New York, Wiley (321-339).
- Winch, G.M. (2014) Three Domains of Project Organising. *International Journal of Project Management*. **32**, 721-731.
- Winch, G. M. and Bonke, S. (2002). Project Stakeholder Mapping: Analyzing the Interests of Project Stakeholders. In : Slevin, D. P. Cleland, D. I. and Pinto, J. K. *The Frontiers of Project Management Research* Newtown Square, PA Project Management Institute (385-403).
- Winch, G. M., Clifton, N, and Millar, C.J.M. (2000). Organisation and Management in an Anglo-French Consortium : the Case of Transmanche Link. *Journal of Management Studies*. **37**, 663-685.
- Winch, G. M. and Schmidt, S. E. (*in press*). Public Private Partnerships: A Review of the UK Private Finance Initiative. In: Jefferies M.C. and Rowlinson, S. (Eds) *New Forms of Procurement: Public Private Partnerships and Relational Contracting in the 21<sup>st</sup> Century*. London, Taylor and Francis.
- Yang, J., Shen, G. Q., Ho, M., Drew, D. S., and Xue, X. (2011). Stakeholder management in construction: An empirical study to address research gaps in previous studies. *International Journal of Project Management*. **29**, 900-910.
- Yang, R.J. (2014) An Investigation of Stakeholder Analysis in Urban Development Projects: Empirical or Rationalistic Perspectives. *International Journal of Project Management*. **32**, 838-849.
- Yang, R. J. Wang, Y. & Jin, X-H. (2014) Stakeholder Attributes Behaviors, and Decision-making Strategies on Construction Projects: Importance and Correlations in Practice. *Project Management Journal*. **45**, 74-90.



Zeng, S.X. Ma, H.Y. Lin, H. Zeng, R.C. & Tam, V.W.Y. (2015) Social Responsibility of Major Infrastructure Project in China. *International Journal of Project Management*. 33, 537-548.