Lewis, B. (2013). What is a project? Towards a new ontology for projects and project management.
What is a project? Towards a new ontology for projects and project management

Bronwen Lewis

University of Bristol, Department of Management
Bronwen.Lewis@bristol.ac.uk
Abstract
Despite the ‘projectification’ of work (Maylor, Brady et al. 2006), the talk is of high-profile project failures and of a crisis in the project management profession. My paper suggests that the crisis stems from the taken-for-granted nature of projects and proposes the exploration of a new ontology for projects and project management. Conventionally, projects are described as entities that are expected to respond in predictable ways to universal, standardised project management approaches. If projects are not effective in controlling work, are we are ‘out of control’? More critical analyses identify that projects are not value-free, objective entities. Instead, one theme in the literature explores projects as social constructs (Green 2006, Marshall 2006, Smith 2006), where one logical conclusion is that these activities are so particular and situated as to be beyond the use of formalised project management tools (Nocker 2006). Others identify projects as vehicles of oppression that discipline and control the worker, as well as the work (Thomas 1998, Hodgson 2002). Focusing on one form of project control, the management of risk, indicates a normative paradox: although this is a core project management technique, it is not always carried out (Pich, Loch et al. 2002, Raz, Shenhar et al. 2002, Atkinson, Crawford et al. 2006).

The projectification of work may itself be the source of risk and failure; a by-product of modernity (Beck and Ritter 1992, Beck 2009). At the same time Beck suggests that risk does not equal ‘catastrophe’, instead it has two faces: ‘chance and danger’ (Beck 2009: 4). I identify that the different ways of understanding the nature of “a project”, different ontological perspectives, suggest paradoxical positions. The organisational change literature (Poole and Van den Ven 1989, Lewis 2000, Seo and Creed 2002, Seo and Putnam et al. 2004, Barge, Lee et al. 2008, Smith and Lewis 2011) suggests that, rather than privileging one world view or the other, we should seek to understand both polarities of the paradox. In projects, as well as narratives of failure, we can identify those of success (and vice versa); alongside control, we must recognise ambiguity and uncertainty.

Rather than replacing the normative naïve realist ontology with a constructivist/structuralist ontology, I suggest that there is potential in adopting a critical realist perspective (Bhaskar 1975, Danermark 2002, Mingers 2004, Fleetwood 2005, Sayer 2010) to explore a stratified ontology of “a project”. Critical realism suggests a framework that rejects the naïve realism of the conventional (positivist) view of projects and requires instead that projects be understood in different modes of reality: explicitly as socially constructed entities, influenced by specific historical, political, economic, social and institutional contexts, and subject to causal powers that have their own stratified existence. Rather than simplistic descriptions of project failure and the crisis of project management, a better understanding of projects may help us to understand how to live with the simultaneous existence of catastrophe and success.
Introduction

Despite large numbers of reported project failures (Atkinson 1999; Linberg 1999) and a crisis in project management (Koskela and Howell 2002), projects are an increasingly popular way of managing work (Packendorff 1995, Hodgson 2004, Maylor, Brady et al. 2006). Identifying work as a “project” may appear to suggest that it becomes more controllable than other forms of activity. However, when “real life”, in all its messiness and complexity, intrudes on this view, the ability of project management to offer a solution is threatened. Critical perspectives deliver robust challenges to the very idea of projects and their management. It may not just be projects that fail; project management may be no better and no more successful than any other management approach.

This paper considers the conventional and critical perspectives of success and failure of projects and project management. Reflecting on the literature, I identify the paradoxical nature of success and failure that relates to different perspectives of “a project”. Rather than continuing to think conventionally about projects in terms of critical success factors or critically in identifying reasons for project failure, I suggest that there is potential to explore the polarities of this paradox by focusing on our understanding of the ontology of projects.

Conventional perspectives of projects

Traditional perspectives take the nature of project success for granted. The focus is on structured approaches and methods that are applied to control the ‘project triangle’ of time, cost and scope or outcome. Alongside these structured approaches are a burgeoning number of “best practices”, “critical success factors” and “lessons learned” that suggest that there may be a need to focus more explicitly on project failure.

A common way to introduce project management texts is to suggest that projects have always been with us, giving examples as the pyramids (eg Nicholas 2004, Shenhar and Dvir 2007), the Great Wall of China, the Tower of Babel, or even Creation (eg Morris 1994). It is assumed that we know what attributes of these enterprises make them ‘projects’. We can speculate that projects are large and complex, take a long time to accomplish and would have required considerable organisation (management) to achieve. However, it is unlikely that the term “project” or similar concept was used by the people who delivered these undertakings, and we have no idea whether they used structured methods or approaches to guide the organisation and management of the delivery of these project. These projects may be judged a success in retrospect, but we cannot know whether they were deemed to be successes or failures at the time they were being completed.

‘Project management’ emerged from the wider field of business management in the 1950s. Morris (1994) and Hodgson (2002) suggest that Gaddis coined the term in his paper for the Harvard Business Review (1959). As time has gone on, the history of projects and project management has been identified as developing from scientific management (eg Morris 1994), which emphasises a particular view of projects. Scientific management approaches to solving industrial problems have been described as seeking to apply analytical measurement and control to human beings.
in a similar way to what had been applied to physical objects (Nelson and Campbell 1972). The goals of economic efficiency and minimisation of waste were to be achieved through an understanding of the tasks to be done to carry out the work. There was a conviction that ‘if we had proper methods, the results would follow’ (Gantt 1916: 61). One legacy of the scientific management approach for projects today is the continued use of structured methods to understand and improve organisational processes, where the goal is efficiency: a factor of time, cost and outcome. These attributes then come to define both projects and their success (or failure).

The professionalisation of project management

The professional project management organisations have codified the attributes of projects that reinforce the idea of a project based on this “project triangle” of time, cost and outcome and of project management as a scientific approach, which is capable of universal application. The first professional bodies for project management practitioners were established in the 1960s and 1970s. They have since enjoyed ‘phenomenal’ growth in membership (Morris, Crawford et al. 2006).

From an initial focus on sharing information, through seminars, journals and magazines, the professional organisations started to accredit practitioners, based on their own codified knowledge of project management. The establishment of professional bodies creates a potential power base for the organisation and for its members (Hodgson and Cicmil 2007). The most successful professions create value for the organisations and the individuals who practice in accordance to the rules that are based on the accumulated knowledge that is shared, once the barriers to entry to the profession are passed.

The professional organisations promote the idea of universal, rational and objective standards that are capable of general application (Hodgson and Cicmil 2007). A number publish “bodies of knowledge”, such as PMI’s PMBOK Guide and Standards (PMI 2012) and PRINCE2 (APM Group 2012). For example, the APM Group suggests that PRINCE2 (initially developed by the UK Government as an approach to managing public projects) ‘can be applied to any project regardless of project scale, type, organisation, geography or culture’ (APM Group 2012).

However, there is a conflict or paradox that appears to undermine the logic of project management as a pure ‘scientific’ discipline. On the one hand is the suggestion that project management processes, approaches and tools ‘work’ in all project environments. At the same time as promulgating this idea of universality, the practitioner is expected to adapt the use of standard approaches to different circumstances. For example, in the UK, the PRINCE2 project management methodology now states explicitly that the approach is designed to be flexible to different circumstances by requiring the practitioner to exercise their experience in order to identify how this flexibility is to be achieved (APM Group 2012). Identifying that experience is needed in order to apply project management approaches calls into question the claim of project management to be independent, rational and objective.
The “human” dimension

In the 1970s and 1980s project management starts to integrate “human” perspectives into the scientific management paradigm (Morris 1994; Kwak and Anbari 2009). This can be seen in the inclusion of the human dimension into the definition of projects and a focus on the roles and skills required in the delivery of projects.

In acknowledging the human element, project management still retains the traditional scientific focus, but allow a role for people within the project triangle. Cleland and King define a project as ‘a combination of human and non-human resources pulled together in a “temporary” organisation to achieve a specific purpose’ (Cleland and King 1975: 184). Andersen identifies projects as a ‘human endeavour’ (Andersen 1987:15), limited in time and scope and meeting a range of goals and objectives. Kliem and Ludin suggest that people are ‘the missing criterion’ (1992:1) at the centre of the project triangle, which they describe as cost, “schedule” and “quality”.

As well as being included in the definitions and descriptions of projects, ‘people’ start to be seen by some as an important element of project success. Some researchers point to the specific HR practices that are related to successful projects, for example clarifying different roles and responsibilities, team building, communications and stakeholder analysis (Papke-Shields, Beise et al. 2010). Paradoxically, other research indicates that people are not always seen as one of the ‘success criteria’ for project delivery, for example Belout and Gavreaux make a ‘surprising’ finding that the personnel factor is only a marginal variable in successful projects (2004). Others suggest that, instead of being specifically identified, ‘the people side of the success factors is woven into their very fabric’ (Cooke-Davies 2002:189). These examples start to indicate that the concept of project success may be difficult to pin down.

A main focus of the ‘people bit’ in project management has been on roles and skills needed for the successful management of projects. The project manager is identified as having a key role, but there are very different views of what this role should be. Some see the project manager as charismatic leader; others as a technical practitioner. In the 1980s and 1990s, there is a focus on the leadership skills required by project managers (eg Andersen 1987; Boddy and Buchanan 1992; Bee and Bee 1997). This emphasis on project leadership appears as a response to the need to manage challenging stakeholder environments, diverse project teams and goals that may be uncertain and subject to change. Conversely, project managers have been seen as managers of the processes, techniques and approaches to project management, as codified by the professional bodies.

The complexity of the real world makes varied and different demands in terms of project management skills. Nicholas suggests that project management is ‘broader and more sophisticated than traditional management of repetitive activities’ (2004:12). He identifies four types of managers of projects: those who are responsible for communications; coordinators of project controls; ‘matrix managers’, who direct the project; and ‘pure’ project managers, who are in command of the project and are generalists, not technicians (2004: 26). Consequently different circumstances and different contexts should lead organisations to choose the right sort of project manager to meet their needs in managing their particular project.
However, this again contradicts the conventional view that suggests that project management can be applied to any project.

Others anticipate that project managers must develop a broader skillset. Muller and Turner (2007; 2010) hypothesise that project managers need to demonstrate a range of intellectual, management and emotional leadership skills in the delivery of successful projects, and must be prepared to adapt their style to the type of project, which they classified by application area, complexity, strategic importance and contract type (Müller and Turner 2010: 440). Similarly, project managers are seen as needing to be leaders of business and human processes in projects (Van Der Merwe 2002) and to demonstrate a mix of hard and soft skills, and in addition ‘inner confidence and self-belief from personal knowledge and experience are likely to play an important role in a manager’s ability to deliver a project successfully’ (Lee-Kelley and Kin Leong 2003:590).

This review indicates confusion about the role of the project manager. Traditional project management remains focused on project managers employing mechanisms of control to taken-for-granted entities - projects - that are expected to respond in similar ways to these approaches. Project managers are seen as technicians, creators and manipulators of spreadsheets, driven by fixed requirements of time, money and scope. An alternative view sees projects as more fluid entities requiring charismatic leadership to manage challenging stakeholder environments, with uncertain and changing goals.

The different ways that projects are understood create paradoxical expectations of how projects are expected to be managed. This presents a personal challenge to project managers, as well as a challenge to the profession. Is it really possible that many such people exist that can embody such diverse understanding, experience, skill and ability? To paraphrase Elizabeth Bennett: ‘I never saw such a project manager. I never saw such capacity, and experience, and application, and skill.’ (Austen 1972: 85). With these divergent views, how can project managers ever be successful?

Professional project management organisations provide methodologies and approaches that are designed to be of general application to activities called projects. They offer the prospect of simplifying our understanding of the world and making it controllable. However, as these approaches are found to have limited use in understanding and managing projects in the real world, their perceived value is undermined. There is a danger that the Emperor will be discovered to have no clothes. Project management – and project managers – may be no more successful than less specialised occupations. This could lead to disillusion and doubt in the value of the profession, and in these things we call projects.

**Critical theory and projects**

Traditional ways of understanding projects and how they are managed have failed to deliver successful projects. An increasing number of explicitly critical challenges have been made to the hegemony of the scientific management view of projects and their management. Rather than being seen as objective, logical, rational and value-free entities, critical thinking highlights the subjective, emotional, value-bound and
oppressive nature of projects. Critical perspectives also call into question the reality of “the project” and the nature of success and failure.

**Projects as universal, idealised, reified objects**

One theme in the critical literature identifies that projects are treated as universal, idealised objects (following Bowker and Star 1999) and as abstractions that have been reified as having material existence, separate from human apprehension (Hodgson and Cicmil 2006). The process of idealised reification results in ethical, political and moral questions being excluded from the project and its management (Hodgson and Cicmil 2006; Linehan and Kavanagh 2006). This highlights a danger that both the objectives of the project and means of achieving it may be ethically, politically and morally wrong, but the project could be deemed a “success” in terms of the delivery of the output at the agreed time and cost.

Hodgson and Cicmil’s (2006) exploration of the Project Management Institute’s Body of Knowledge (PMBOK) identifies that the passive tone and collective authorship serve to encourage the reification process. The PMBOK presents projects and their management as universal, objective and scientific. At the same time, we can see the aim to establish this as an accepted body of knowledge as being ‘clearly rooted in and carried by the desire for power and recognition of particular social groups who want to make their interpretation of the world the universal one’ (Mannheim 2003: 132). It is in the interests of the professional bodies to claim scientific objectivity as a way of enhancing their role.

However, the professionalisation of project management has not been successful. Despite the aim of universal codification, each of the professional bodies has their own, different rules, approaches, language, and accreditation. The very existence of different bodies of knowledge calls into question their epistemological value. Rather than being the repository of value-free “fact”, the different approaches reflect the historical, political, cultural and institutional contexts within which experience and knowledge of projects has developed (Hodgson and Cicmil 2006).

The goal of universality is further undermined by continued differences between the professional organisations and by the ‘survival instincts of innumerable academics and consultancies who rely on product differentiation in order to market their own models, applications and services’ (Hodgson 2002:809). There is a tension here. One the one hand there is the promise of standardised approaches to the management of a particular type of business activity - projects - that appear to offer the certainty of successful delivery, whatever the context and circumstances. On the other is the drive of competing institutions and professionals to identify competitive advantage by offering new and innovative proprietary approaches which call into question the idea of a standard and controllable “project”. The practice of project management may be inherently destructive for the profession.

**Projects as social constructions**

The paradox between universalism and particularism becomes even more evident in the literature that sees projects as social constructions. The recognition of situated perspectives also has implications for how we see project success – and failure.
Rather than conforming to a universal definition, researchers have argued that projects must be acknowledged as socially constructed entities. Linehan and Kavanah (2006) propose that projects should be seen as an emerging or “becoming” ontology (2006:55). Instead of adopting a singular defined world view, paradigm or cognitive code, they argue that it is ‘better to think of a project first as a language and second as a practice’ (2006:55).

Similar views point to multiple, co-existing versions of the project, requiring ‘more overt recognition of processes by which project reality is socially formed, shaped, interpreted and re-interpreted’ (Smith 2006:204). Instead of following formal sequential steps, as suggested by conventional project management texts, the project is subject to ‘legitimate serial reinterpretation’ (Smith 2006: 202). This implies that people will have different co-existing versions of the project, and that project definition is not a one-off exercise (Green 2006; Marshall 2006; Smith 2006).

The suggestion that projects are “constructed” by those involved in the delivery of projects, not once, but on an ongoing basis, reflects the views of post-modernist philosophers. For example, Jean-François Lyotard proposes that we abandon all attempts to create universal meaning, and even the more limited goals of epic stories and metanarratives (How 2003:162). Accordingly, there can be no single narratives of project success and our understanding of projects is only possible on a very local basis.

Nocker (2006) offers one of the most postmodernist descriptions of projects, which she describes as occupying multiple “spaces”: social, mental and physical. Her research identifies that these ‘project spaces constantly move and transform over time’ (Nocker 2006:152). As a result, she suggests that projects may be beyond the use of formalised project management tools.

Social constructivism presents a practical as well as a philosophical challenge to project management. If projects, in common with all social objects, are constructed, it makes it difficult to see how project managers can be sure how best to act on the basis of a subjective, changing interpretation. In turn, success and failure are transitory concepts that depend on the situated perspective of the beholder.

**Projects as vehicles of oppression**

Another important strand in the critical project management literature adopts a post-structural, neo-Marxian perspective that views the project manager as an unwitting agent of structural mechanisms which discipline and control the worker, the project manager and their team, as well as the work (Thomas 1998; Hodgson 2002). As a post-bureaucratic form (Hodgson 2004; Lindgren and Packendorff 2006a), projects may be more successful in this than other forms of organising.

Hodgson (2002) identifies that the term discipline, when applied to project management, can be used in the dual sense of field of objective scientific study and a form of control. He suggests that the ‘burden of control falls disproportionately in project teams’ (Hodgson 2002:819) and views this as a result of the incomplete professionalisation of management generally and of project management specifically (unlike other professions, such as law and accountancy). In turn, this leads to
project management practitioners “disciplining” themselves ‘even more rigorously than would the “true” professional’ (Hodgson 2002:819).

Projects are identified as being ‘characterised by insecurity, anxiety, unstable careers, fragile and corroded identities’ (Linehan and Kavanah 2006: 63). They are mental prisons which generate ‘stress, loneliness, disrupted family lives and superficial workplace relations’ (Lindgren and Packendorff 2006a:113). These perspectives reflect more general concerns about post-bureaucratic organisations which generate low commitment, absenteeism and high turnover of staff (Grey 2009: 41).

Ultimately, projects are unlike how they are depicted in the ‘sanitised world of the project management literature’ (Green 2006:236). The project parameters of time, cost and outcome become an “iron triangle” that disciplines people ‘in space, in time and in their souls’ (Lindgren and Packendorff 2006a:127).

This is a bleak depiction of projects. It is difficult to understand why people continue to undertake these activities if they are inevitably subjugated by this form of work. Are projects really much worse than other forms of work within the same historical, political, economic and social contexts? I think there is the danger here of a linguistic fallacy (Higgs, Jones et al. 2006: 92), where the language of discipline and control is taken to represent the reality of oppression in projects.

It seems somewhat contradictory that the concepts of traditional project management can be attacked, on the one hand, as being unrealistic as they result in failed projects and, on the other, as having the potential to create such human suffering. If projects cannot be managed and controlled successfully by scientifically rational processes, how much is project management to blame for imposing oppressive control over the workers? It seems that we have different perspectives of the nature of control. This has implications for our understanding of projects, and of the nature of failure and success.

Projects as masculine and feminine constructs
Exploration of projects from a gendered perspective identifies projects as representing a combination of masculine and feminine attributes. The language of traditional project management emphasises the masculinist features of discipline and control, although female-gendered elements are also present (Buckle and Thomas 2003; Lindgren and Packendorff 2006b). This suggests another project tension or paradox.

Buckle and Thomas (2003) suggest that there is an increasing acceptance of the value of female-gendered strengths that can be identified in project management. Their deconstruction of the PMI’s project management Body of Knowledge (PM BOK) examines the language used to define projects, conceive of project management, the role of the project manager and in the understanding of risk. They identify masculine traits such mastery over the work environment through task orientation, planning, execution and control, including the use of checklists and milestones. The masculine is also present in objective and impersonal approaches to decision-making. In contrast, feminine attributes are described as the need for a project to be responsive to the demands of the wider organisation, to engage with
stakeholders, satisfy customer requirements and encourage shared ownership of project outcomes. Such activities require female-gendered modes of thought and action, such as connection, democratic decision-making, power-sharing, empathy, sensitivity to emotional contexts (2006: 435). Whilst recognising both masculinist and feminist aspects, ultimately they conclude that ‘much of the feminine side of project work appears to have been “disappeared”’ from the PM BOK (2006: 439).

Lindgren and Packendorff (2006b) identify that masculine norms of control, dedication to work and competitiveness are strongly represented in project work. In their research, their interviewees, both male and female, ‘describe projects as necessary efforts to achieve total control over a course of action through the construction of boundaries in time, space and scope.’ (2006: 855). They identify that a project can also be conceived of as having the implied feminine qualities of creativity and flexibility, team-work, the absence of hierarchies and flexible work patterns (alongside a ‘masculine’ long hours culture).

An expressly feminist stance would oppose a view of projects that privileges the concepts of objectivity and neutrality, the universal (male) subject of knowledge, fixed truth and immutable reality, all of which exclude women and the female perspective (Holmwood 1995). Today’s women project managers seem to take a more equivocal view as they try to succeed in male-dominated environments (Gale and Cartwright 1995a; Gale and Cartwright 1995b).

The relatively small amount of project management literature that considers gender issues suggest that recognition of the value of both masculine and feminine attributes would enhance practice. In the real world of complexity and change, it may be that polarised and inflexible perspectives set up projects and project management to fail. Instead, project management’s potential to accept the feminised qualities of ambiguity and uncertainty would enhance its value as a strategic asset (Lindgren and Packendorff 2006b). Exploring both types of ‘logic system’ (Buckle and Thomas 2003: 439) would allow the strengths of the different genders to be recognised explicitly, rather than assumed.

Gendered analyses of project management indicate that feminisation of the concept of what a project is may go some way to acknowledge complexity, uncertainty and ambiguity, alongside conventional, masculinist, views that emphasise simplicity, certainty and the taken-for-granted nature of projects. This dual understanding of projects reflects other depictions of projects as being both hard and soft (e.g. Crawford and Pollack 2004) and quantitative and behavioural (Nicholas 2004). This suggests an understanding of the nature of projects which is able to identify both aspects of a polarity. I go on to explore the paradoxical nature of projects.

**Project paradoxes**

Reviewing the project management literature identifies contradictory, conflicting or paradoxical views of what constitutes “a project”. The traditional view suggests that framing work as a project enables it to be controlled by focusing on the attributes of time, cost and outcome; the project triangle. The scope of a project is created to make it certain and deliverable. Having defined the project and its parameters, we make it controllable. The successful project manager is in control and their projects...
are successful. This perspective sits oddly with the identification of numerous project failures.

Traditional project management tends to describe failure through identifying the opposite. The focus in the literature is on ‘best practice’ and ‘critical success factors’ (Clarke 1999; Cooke-Davies 2002) or ‘lessons learned’ (Schindler and Eppler 2003; Williams 2008; Swan, Scarbrough et al. 2010). (An exception is the identification in the UK public sector of ‘common causes of failure’ (OGC 2005), although these examples are also given as a way of achieving success.) The need to focus on these additional elements seems to indicate that the ‘scientific’ project management approaches are not working. The response from some of those involved in project management has been to develop more complex processes (eg Shenhar and Dvir 2007). However, paradoxically, it may be that adhering to traditional scientific management perspectives may simultaneously be the major cause of project failure (Cicmil, Hodgson et al. 2009: 84).

The critical project management literature challenges our understanding of projects and project management by highlighting alternative perspectives. Excluding ethical, political and moral considerations could mean that project success can also be seen as a catastrophe. The successful completion of a nuclear power station project would be seen as a failure to an opponent of nuclear power. The reverse may also occur: the failure of the UK’s Identity Cards programme can also be seen as a triumph for human freedom and civil liberties. Projects may be simultaneously successful and unsuccessful, depending on different values, moral codes and beliefs.

Developing this perspective, projects can be seen as social constructions, where success and failure depend on particular perspectives, which can change over time. The Sydney Opera House, finished late, over budget and with poor acoustics is nevertheless successful as the symbol of a nation. The UK’s Millennium Dome was criticised as an underwhelming project to mark the year 2000 but has now been transformed in its role as a successful music venue. The story of the London Olympics seemed to be heading for disaster with the resourcing problems identified shortly before the start, but the Olympics and Paralympic Games have been hailed a success, although there are concerns that the anticipated “legacy” may not be achieved. These examples focus attention on the potential for divergent views of success or failure by adopting different perspectives. Over time, failure may become success, or vice versa, as the scope of the project changes.

These examples focus on project outcomes as the determinant of success. The critical literature also focuses on the failures of the process of project management. Looking at the critical challenge that sees projects as vehicles of oppression of the workers, different concepts of success and failure are present. Post-structural perspectives call into question the scope for human agency to ‘manage’ or ‘control’ structural mechanisms that are determined by the historical, economic, social and political context. Accordingly, the successful project manager simply succeeds in implementing approaches that end up controlling and disciplining themselves and their teams, with negative consequences to their lives.
The nature of this critical perspective calls into question the ability of human agency to act independently of the structure and context of the encompassing society, being constrained by specific historical, economic and political circumstances. This represents a different type of challenge to project management as that it suggests at best a very limited ability to influence success or failure. For the practitioner working within the system, the logical philosophical conclusion - that it makes no difference what they do - is unhelpful.

These critical perspectives highlight important challenges to the conventional project management literature. However, there is a tendency towards two parallel strands in the literature. Traditional approaches treat projects as unquestioned and universal, objective entities that are capable of control. Critical perspectives offer important challenges to this understanding but are unable to explain why, despite the various ways that projects are seen to fail, the idea of projects and project management is still so prevalent and pervasive. It may be that our striving for control is the reason for failure.

Projects: a potential for chance and danger, rather than catastrophe?
Ulrich Beck’s concept of the Risk Society (Beck and Ritter 1992; Beck 1999; Adam, Beck et al. 2000; Beck 2009) suggests that our society faces ‘hazards and insecurities induced and introduced by modernisation itself’ (Beck and Ritter 1992: 21); risks are the ‘side effects of successful modernisation’ (Beck 2009: 8). In many fields, the application of scientific rationality has led to unexpected and unpleasant consequences. Recent events illustrate Beck’s proposition: complex financial arrangements contributed to the financial crisis of 2008; the ability to harness nuclear power exacerbated the consequences of the natural disaster of the tsunami in Fukushima, Japan; genetically modified crops appear to pose unforeseen hazards to our native species.

This paradox of modernity may help to explain both why project management has become an important way for managing business activities and the reason for the many project failures. The more we know, the more we identify as unknowable; the more we do, the greater the potential for unforeseen consequences; the more we try and control, the greater the potential for uncertainty, ambiguity and failure.

The recognition of fundamental and enduring uncertainties and ambiguities requires new and different responses, rather than more of the same. Beck and Ritter (1992) argue that risk cannot be addressed and understood by remaining in the rational scientific mindset. Rather than viewing risk in a single dimension, we should recognise the risk does not equal ‘catastrophe’; it has two faces: ‘chance and danger’ (Beck 2009: 4). There is potential to adopt not only the ‘arrogant assumption of controllability and perhaps also the wisdom of uncertainty’ (Beck 2009: 5). This “both/and” perspective suggests a possible way forward in responding to paradox that is reflected in the organisation and management literature.

Paradox in the organisation and management literature
The organisation and management literature of the last 20 years has shown an increasing interest in paradox (Poole and Van den Ven 1989; Lewis 2000; Seo, Putnam et al. 2004; Smith and Lewis 2011). The focus here is on the tension that is generated through ‘contradictory yet interrelated elements that exist simultaneously’
(Smith and Lewis 2011: 382), rather than an either/or focus on opposing polarities. The suggestion is that the exploration of paradoxes allows for new theory building, through the explicit examination of theoretical inconsistencies (Poole and Van den Ven 1989).

Paradox and dualities are not necessarily mutually exclusive but ‘what is targeted and privileged often drives out or subjugates the polar opposite that resides in the background of the process’ (Seo, Putnam et al. 2004: 74). It is hence important to recognise and explore both faces of paradoxes. This would seem to be particularly important as, the nature of modernity, in all its messiness and complexity, may be inherently paradoxical (Poole and Van den Ven 1989; Lewis 2000). Similarly, Ashcraft and Trethewey suggest that dualities, contradictions and paradoxes are likely to be ‘a normal condition of organisational life, not an anomalous problem to be removed or resolved’ (2004, cited Barge 2008: 387). Accordingly, a focus on paradox may be helpful in developing our understanding of the nature of projects, and of project failure and success.

A dominant theme in the organisation and management literature is of the paradox of control. As we have seen for projects, paradoxically, management practice appears to generate the opposite of control. The opposing pole has been suggested as lack of control (Streatfield 2001), complexity and chaos (Bourne and Walker 2005), uncertainty and ambiguity (Pich, Loch et al. 2002), and also, more positively, innovation (Hodgson 2004), flexibility (Lewis 2000) and responsiveness (Graetz and Smith 2008). These examples suggest that management is a paradoxical mix of control and the opposite of control. There appear to be different views of what people attempt to control and what the anticipated outcome of that control will be.

The literature considers ways that such paradoxes have been addressed in organisations. The responses range from denial to acceptance and active management (Smith and Lewis 2011). In terms of new theory development, Poole and Van den Ven (1989) have been influential in identifying ways that paradox can be explored. They indicate four approaches for working with paradox in organisations: accept and use paradox constructively; apply spatial (micro/macro) and temporal separation, and synthesis. Synthesis involves an understanding of the other perspectives and approaches to paradox. Seo, Putnam et al (2004) build on this work and identify that the responses to paradox have changed over time, from an emphasis in the mid-twentieth century on separation strategies to developing a more complex understanding and lastly to more transcendent and integrative approaches. This reinforces my view that there is value in looking at project paradoxes in a way that integrates different perspectives.

**Structure and agency**

Structure and agency is one paradox identified in the organisational and management literature (Poole and Van den Ven 1989; Seo and Creed 2002). From the perspective of post-structural critical theory, our ability as actors to influence our social environment is called into question. For example, Grey predicts the end of “management”, suggesting that management and control is unrealisable in practice (Grey 2009: 135) Being embedded in our historical, cultural and institutional settings means that our agency is limited and constrained by specific contexts. At the same time, there are other theoretical perspectives that, while accepting the
importance of historical context and social structure, allow a role for human agency. These perspectives include structuration, institutional theory, pragmatism and critical realism. Both Giddens and Bourdieu identify that structure and agency are mutually constitutive, that is historical, cultural and institutional settings both constrain and shape actors’ intentions as well as being ‘the objects of constant maintenance or modification through action’ (Seo and Creed 2002: 224). In turn, this provides both an opportunity and responsibility as a (project) manager to act in a conscious and purposeful way (Flyvbjerg 2001). Seo and Creed (2002) suggest that the potential to adopt praxis and act as a ‘mobilised change agent’ increases as the tension arising from paradox increases.

While I am interested in the ability of project managers to act as purposive agents, I find that I keep coming back to the ontological nature of projects as being distinctive for a new understanding of project management.

**Ontology**

At the same time as the focus on the agent, my contention is that there is value in exploring the nature, or ontology, of “a project” itself. The term ontology implies that there are particular - and different - ways of understanding of the nature of being, existence and reality that reflect differing world views, paradigms and cognitive codes (Linehan and Kavanagh 2006). In looking at the failures and successes of projects, we can see that there are different ways that projects are understood to exist. The paradoxes that can be identified may be better understood by focusing on project ontologies.

Traditional views of projects as taken-for-granted entities suggest an implicit (naïve) empirical realist ontology. Sometimes, the term ontology is used to describe ‘something akin to “real” or “existing”’ (Fleetwood 2004: 28). Where ontology is used in this way, it indicates that there is a, usually implicit and unexamined, assumption about reality that reduces it to a phenomenon that is empirical and ‘objective’ in an idealist sense. We can see this ontological position in normative views of projects and project management where a project is seen as an objective entity, some unquestioned “thing” that can be identified empirically.

A naïve realist project ontology can be critiqued both from within the normative perspective as well as more critically. Morris et al identify that the ‘ontology of the profession’ is reflected in the APM’s Body of Knowledge and is ‘the set of words, relationships and meanings that describe the philosophy of project management.’ (2000: 156). At the same time, experienced practitioners know that the reality of project management is not the same as the generic frameworks and approaches, so it should be unsurprising that they do not stand up to critical analysis (Morris 2006). However, this knowledge does not explicitly call into question the different ways that projects can be understood.

The critical project management literature, in identifying the problems with traditional and normative approaches, emphasises different ontological perspectives. Seeing projects as socially constructed entities suggests an interpretivist or even relativist ontology, where projects can only be understood in specific and situated terms, which are subject to continual change. This perspective makes a direct challenge to
the usefulness of universal, generic, structured project management approaches for such individual, located, flexible and changing activities.

Identifying projects as products of social, political, cultural, economic, ethnic and gender values can suggest a ‘historical realist’ ontology (Guba and Lincoln 2005), where the focus is on the structural forces that shape society. The theoretical question posed is then how much scope there is for organisational forms and human agency to be valid as subjects of inquiry. Instead of looking at projects, we should be looking at the context for, causes of and consequences for these activities.

These themes provide useful challenges for how we think about projects. However, we should be careful about simply rejecting the old views in order to embrace the new, often critical, perspectives (Winter, Smith et al. 2006). There is a potential danger in replacing one ontological perspective with another. Linehan and Kavanah suggest that ‘excessive attachment to one world view may actually create problems’ (2006: 52). Williams also highlights the danger that a fixed, inflexible ontology poses: ‘The idea of “project management” imposes an ontology and a specific way of thinking; this immediately frames ways of thinking when reviewing projects, and can pose difficulties in thinking critically.’ (2008: 250). Rather than thinking about traditional ‘project management’, or adopting one or other critical perspective, then, is there potential for developing a more complex ontological understanding of “the project”? This question has led me to start to explore critical realism as a way of developing a new ontological perspective of projects.

Next steps – adopting a critical realist perspective

My contention is that, in order to understand project failure, we need to explore the nature of ‘a project’ in a different way that allows for the existence of different, potentially paradoxical, perspectives. A critical realist view suggests that projects “exist” in different ways. Using a stratified ontology as a framework may help to better understand the paradoxical nature of project failure.

Critical realism – a brief overview

Critical realists identify a central premise, that there is a “reality” that exists independently of our experience of it. This reality is not naively realist; the world is not seen as a flat, discoverable reality. Nor is it simplistically relativist or constructivist, reality is not reducible to discourse. These suggestions indicate that critical realism identifies that there are other ways of being. A number of authors (eg Archer 1996; Danermark 2002; Mingers 2004) follow Bhaskar (1975; 1979; 1989) in suggesting that the world is stratified in three ontological levels: the empirical, the actual and the real. The “empirical” level represents what is experienced, and the knowledge we gain from observation and experience. The “actual” is what can be inferred from our observations. At the “real” level are causal powers and generative mechanisms.

The knowledge that is gained from direct experience is transitive; that is, it is subject to continual change as our experience, perceptions and assumptions change. At the same time, there is an intransitive dimension of causative powers and forces that have potential as generative mechanisms. These cannot be experienced directly, but we can theorise that they “exist” as they have consequences that influence the actual and empirical levels. Our theories and assumptions are, of course, social
constructions and belong to the realm of the actual. Importantly, critical realist causality has no similarities with Humean empirical conjunctions, universal regularities and deterministic effects, as these powers and mechanisms only have potential to operate and may be affected by the operation of other mechanisms.

Instead of epistemology, critical realism is concerned with explanation through the exploration of a stratified ontology (Fairclough 2005). Acknowledging this stratified reality brings with it a requirement to develop theories about the relationships between the ‘real’ underlying structures, the ‘actual’ events and processes and the visible empirical actions, activities and consequences. This theorising will be explanatory in nature, rather than prescriptively deterministic. The aim is to understand the relationships between the layers of reality, the emergent properties and the causal mechanisms. The key question posed by critical realism is why things happen (Pawson and Tilley 1997), although not in terms of simplistic causalities. The focus is not universal generalisation or determinist prediction, but ‘to get beneath the surface and understand and explain why things are as they are’ (Mingers 2004: 100).

Critical realism has been used as an alternative perspective in social science (Layder 1993; Archer 1996; Sayer 2000; Danermark 2002; Sayer 2010), organisation and management (Fleetwood and Ackroyd 2004; Fairclough 2005; Fleetwood 2005; Leca and Naccache 2006; Miller and Tsang 2011), policy evaluation (Pawson and Tilley 1997), economics (Lawson 2003) and information systems (Mingers 2004).

In attempting to apply a critical realist perspective, conceptually, a project will need to be understood at all three levels. Projects will reflect their particular “real” context, within history, society, technology, institution, culture, power relations and so on. They will also be influenced by the approaches that project managers choose to adopt, which will be influenced by their assumptions, understanding and expectations of their context and of the empirical domain. The results of projects can be tangible outputs, such as a building, a bridge, a power station, computers on desks etc. At the same time, these outputs will also be socially constructed through the meanings they are given.

I suggest that adopting a critical realist perspective to understanding the nature of a project may help to understand the paradoxical nature of project failure. Accordingly the question ‘what is a project?’ brings into question the context for the delivery of projects, the generative mechanisms that are at work and the outcomes that occur.

**A stratified project ontology: exploring the “project triangle” for the 2012 Olympics**

Taking forward my research, I plan to develop a theoretical perspective of projects through focusing on the “project triangle” in the context of a particular project, the 2012 Olympic Games. The Olympics were hailed as a success after the Games in 2012, however, there were many times when this project was considered a likely failure in the development period, and it has yet to deliver on the expected ‘legacy’. Looking at the stratified ontology of the project may tell us more about the nature of control, and of failure and success.
Critical realism does not offer a method for research (Danermark 2002: 150). Moreover, a critical realist perspective ‘criticises any ambition to develop a specific method for scientific work’ (Danermark 2002: 73). Relatedly, Sayer asserts that ‘realists reject cookbook prescriptions of method which allow one to imagine that one can do research by simply applying them without having a scholarly knowledge of the object of the study in question’ (2000: 19). Danermark (2002) and Sayer (2000; 2010) argue for the importance of a clear theoretical perspective to research that should drive decisions about approach and method. There is also general agreement that the empirical needs to be understood within a particular theoretical framework, and also that theory and empirical investigation progress iteratively (Sayer 2000; Danermark 2002; Ackroyd 2004; Fleetwood and Ackroyd 2004). Accordingly, I set out below how I intend to develop my research.

In exploring the nature of failure and success in projects, I have identified that projects are often described by reference to the “project triangle”. The three elements are usually described as “time”, “cost” and a third attribute, which I have called “scope”, although it has also been referred to as “outcome”, “quality” (Kliem and Ludin 1992) and “goals and objectives” (Andersen 1987). Conventionally, project managers attempt to control these three aspects of projects, where a change in one can impact on the others. I propose to look back at the literature, alongside exploring in detail a real project (the Olympics), in order to build ideas about why these elements exert control in projects and how they relate to views of failure and success. My aim is to explore “time”, “cost” and “scope” in an ontologically stratified way in order to identify the relationships between the different levels of reality. This may help to suggest why and in what ways these relationships change or stay the same as circumstances change.

It may be helpful to use an example. “Time” can be identified as having a stratified nature in projects. In the empirical domain are physical artefacts of “time” in projects, for example the project plan, which defines the end date of the project and project milestones. In the actual domain “time” may exist as a sense of urgency, provide a sense of purpose, be the focus for risk management and so on. In the domain of the real, time has potential as a generative mechanism. Even if humans did not exist, the earth would turn around the sun, with the effect of changing the length of time different parts of the world are in daylight, creating different growing seasons for plants etc. Time is therefore “materially real” (Fleetwood 2004: 33/34) Once we call these concepts “time” we invoke assumptions, intentions and theories about time that exist in the actual domain. However, time is not reducible to discourse.

My research seeks to develop the concepts within the project triangle in theory and to draw on the Olympics as an empirical case study to reflect on how these elements are seen as the project progresses. My approach to the analysis of data will be to consider both the discursive and extra-discursive or socially real factors (Fleetwood 2005; Sims-Schouten, Riley et al. 2007). A wealth of data exists relating to the London 2012 Olympics. This is a practical reason for selecting this project as a case study, as it is often difficult to find particularly contemporaneous information through the period of delivery of a project. I will take as a focus the ministerial reports from the Culture Media and Sports and Public Accounts Committees. These collate a summary report with oral evidence (verbatim remarks of committee members and
their interviewees) as well as written evidence from key moments in the decision-making process for the Olympics. These documents represent "texts" in the dual sense of written reports and accounts and also transcripts of speech (Potter and Wetherell 1987). I propose to explore the different levels of meaning in the texts, as well as considering the wider contexts that are present within and beyond the discourses themselves.

The data is available for the long process of preparing for and staging of the Games. This offers the potential to review the ways in which the project both stays the same and changes over the period. For example, the Committee of Public Accounts report on the preparations from the Games refers to the ‘immovable deadline’ and the need for ‘on time completion’ (2007: 5). These may not change, although a focus on ‘early warning’ and ‘progress monitoring’ (2007: 6) may vary as the context changes. The scope of the project, which I have already identified as a difficult aspect to pin down, will vary in terms of whether the output is seen as, for example, the completion of the Aquatic Centre or the creation of a lasting legacy. Scope is also described in other ways, such as outcomes or benefits, which suggest different underpinning assumptions. Cost can also be seen at different levels from precise budgets of billions of pounds, to the processes of budgeting, negotiation and diverting money from ‘the other good causes’ (2007: 7). Each of the three project parameters could identify different attributes relating to views of success and failure.

Examination of the ontology of the London 2012 Olympics project will also need to reflect the wider context. London 2012 was the most recent of the Olympics which have been held in different countries, generally every four years, with some being viewed as failures and others as successes. Winning the 2012 Olympics came after failures to win bids for 1992 (Birmingham) and 1996 and 2000 (Manchester). The impact of these failures and successes may well be visible in the ontology of the project.

The period of the development of the London 2012 Olympics is one which includes the London bombings on 7th July 2005 (the day after the decision was taken to award London the Olympics), the start of the 2008 economic recession and government elections in 2005 and 2010. I plan to use these key dates as a particular focus to see to what extent the Olympics project may have been affected, with specific emphasis on the attributes of time, cost and scope.

I have described my next steps in seeking to adopt a critical realist perspective to understand “the project” in an ontologically stratified way, by focusing on the elements of the project triangle, which may be important for understanding failure and success in projects. I anticipate that, as my research continues, I will also be able to reflect on my approach to applying a critical realist perspective in the context of a ‘real’ project.

**Conclusion**

This paper has examined project failure (and success) from conventional and then more critical perspectives. When looking at projects, perspectives on success and failure can seem paradoxical. Why are projects still so pervasive as a way of work despite a high rate of project failures? My contention is that projects are much more complex than both taken-for-granted conventional views and current critical
challenges. I plan to adopt a critical realist perspective to investigate a more stratified ontological view of projects by focusing on the “project triangle” of time, cost and scope. Seeing these attributes as generative mechanisms may help to understand more about the nature of projects and project management. Whilst making no grand claims about the potential to avert the crisis in project management, my research aims to understand the project in a more complex, stratified and dynamic way that openly acknowledges the potential for failure and success. If this research succeeds in indicating a way of generating a more realistic view of “the project”, it may be of benefit to future project management practice.

References


organizations, Sage Publications Limited.

Guba, E. G. and Y. S. Lincoln (2005). Paradigmatic Controversies, Contradictions and
Emerging Confluences. The SAGE handbook of qualitative research. N. K. Denzin

Higgs, P., I. R. Jones, et al. (2006). "The importance of critical realism for the sociology of
health inequalities." Making realism work: Realist social theory and empirical
research: 83.


Kliem, R. L. and I. S. Ludin (1992). The people side of project management. Aldershot,
Gower.

Koskela, L. and G. Howell (2002). The underlying theory of project management is obsolete. 

from top management journals." International Journal of Project Management 27(5):
435-446.


Polity.


management and situational leadership in IT services projects." International Journal


Construction of Gender in Project-Based Work." Journal of Management Studies, 
Vol. 43, No. 4, pp. 841-866, June 2006.


