# TIME FLUX: AN EXAMINATION OF NON-TEMPORAL CONSIDERATIONS IN PROJECTS

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#### **ABSTRACT**

Project management is generally considered to be a temporary endeavor. This myopic view of projects results in considerations that are difficult to justify and defend etiologically. We contend that projects are complex environments; project management extends beyond the assumed arbitrary boundaries and that project stakeholder concerns should not be envisaged as adhering to the same disjointed temporal dimensionality to which projects are enslaved. Projects may well terminate but their end result (gains & losses) outlives the project, as such stakeholders continue to be affected. Examples of past projects are provided as empirical evidence and a framework of stakeholder management is proposed.

#### 1. INTRODUCTION

Project management is a key feature of contemporary organizations (Engwall, 2003). The history of projects is as old as civilization itself, projects have and continue to play a vital role in transforming our societies. Projects are initiated for many reasons, such as to wage war, explore the universe, establish trade, and cure diseases.

The first account of project management appeared in 1697, in a book by Daniel Defoe entitled An Essay on Projects (David I. Cleland, 2004). However, major developments in the discipline did not take place until much later, when during the mid-18th century the roles of professional engineer and architect emerged (Morris, 1997) - signifying the separation of the designer from the builder. The work of two management thinkers, Robert Owen (1771 – 1858) and Charles Babbage (1791 – 1871), is crucial to later developments in project management (Gardiner, 2005). Their work was foundational in the development of the human-relations school of management and the modern day profit sharing plan, respectively. Elements of Owen and Babbage's work are apparent in many modern day projects, one such example is the poor human-relations story of the Sydney Opera (Murray, 2004).

The beginning of the 20th century saw the rise of the classical school of management thought, whose major focus was efficiency and included bureaucratic, scientific, administrative and human-relational organizational theories (Gardiner, 2005). The bureaucratic school extended the ideas of Weber; the scientific school was populated by Taylor, Gantt, and Gilbreth; the administrative school was influenced by Fayol and the human-relations school by Roethlisberger. The ideas developed during this period are still in use in modern day project management (Morris, 1997).

It was not until the 1950s that project management emerged as a practitioner's discipline (Carayannis, Kwak, & Anbari, 2005; David I. Cleland, 2004; Hodgson & Cicmil, 2006; Lindgren & Packendorff, 2006; Morris, 1997). The developments in project management during the 1950s were shrouded in secrecy as the US DoD undertook initiatives such as the Manhattan Project and the US Navy's POLARIS submarine and missile system. It was not until the 1970s that project management expanded its research to efforts outside the domain of large scale defense programs. Projects were no longer hidden from public scrutiny and many were openly criticized (cf. Morris, 1997) and opposed by the public, such as the Concorde, United States Super Sonic Transport Program (US SST) and the Trans Alaskan Pipeline. These projects demonstrated two key difficulties with large projects: valuation of projects and community opposition (Morris, 1997). On 7 January 1970, the National Environment Protection Act (NEPA) was enacted; this added an additional dimension of environmental feasibility to project evaluation.

The end of the 1970s saw project management as a discipline, now having a professional voice through the Project Management Institute (PMI) and International Management Systems Association (INTERNET), shifting its focus from tools to organizational and general management issues (cf. Morris, 1997). The concept behind project management was to became a pervasive dictum in various fields (Kerzner, 1992). N.B.: In 1975 INTERNET, UK changed its name to the Association of Project Managers and in 1999 another name change followed to Association for Project Management (APM). INTERNET later changed its name to International Project Management Association (IPMA) in 1994.

The 1980s experienced a push towards 'generic' project management techniques and their application to a variety of projects. In 1981 a formal proposal was

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issued by the PMI to professionalize the discipline of project management, resulting in the Ethics, Standards and Accreditation project (ESA). The ESA issued its report in 1983 later released to the public in 1987 in its final form as the first edition of the Project Management Body of Knowledge (PMBOK) (Damian Hodgson, 2007; Webster, 1994). The increasing prevalence of Information Technology (IT) in the 1980s meant an increase in more complex hardware and software projects being undertaken by the government and industry. Several methodologies were introduced, such as PROMPT (by the UK Government) in the mid-1980s, followed by the Structured System Analysis and Design Methodology (SSADM) and Projects in Controlled Environments (PRINCE) in 1990 (Hedeman, Fredriksz, & Van Heemst, 2005; Morris, 1997). The APM also followed suit, releasing the 1st edition of its body of knowledge in 1992.

In 1998, the Japan Project Management Forum (JPMF) was established as a division of the Engineering Advancement Association of Japan (ENAA) for the promotion of project management in Japan (in 2005 the JPMF was renamed Project Management Association of Japan after its merger with the Project Management Certification Center). In November 2001 the JPMF released the first version of its body of knowledge entitled 'A Guidebook for Project and Program Management for Enterprise Innovation' (P2M).

Developments have continued in the standardization effort, PRINCE went through a revision and was released as PRINCE2 in 1996 (Hedeman, et al., 2005) since then no new versions have been released. The PMI went on to release subsequent versions of the PMBOK under the title of 'Guide to Project Management Body of Knowledge' in 1996, 2000, 2004 and 2008 (PMI, 2009). The Association for Project Management's APM BoK was revised in 1995, 1996, 2000 and is presently in its 5th edition (released January 2006) (APM, 2009). The P2M underwent revisions in 2002, 2004 and is presently in its 4th edition (released October 2005) (PMAJ, 2009). IPMA's Competence Baseline (ICB) first formulated in 1967 was revised in 1999, 2001 and is presently in its 3rd version (released June 2006) (IPMA, 2009).

# 2. Current Status of Stakeholder Management in Project Management

Stakeholders are considered as important to projects; the PMBOK, P2M, and APM BoK all feature stakeholders. However, the role of the stakeholder is relegated only to the project. Despite the introduction of several stakeholder management methods and guideline (D. I. Cleland, 1986; Gilbert, 1983; Jiang, Chen, & Klein, 2002; Savage, Nix, Whitehead, & Blair, 1991) stakeholders concerns are still in conflict with the legacy left behind by Frederick Taylor and the scientific school of management. These guidelines include the execution of the management functions of planning, organiz-

ing, motivating, directing, and controlling the resources used to cope with stakeholders' strategies (Karlsen, 2002).

Stakeholder interactions are considered limited time activities and no mention is made of pre-project or post-project stakeholder involvement. Perhaps this is due to how a stakeholder is defined by the standard making bodies, according to the PMI stakeholders are "... individuals and organizations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion." (Project Management Institute, 2008). The problem of post-project stakeholder is compounded in projectized organizations, where the project team disbands at the culmination of the project. Clearly there is a need to extend the project management framework in use to ensure continued stakeholder management.

Research conducted on the trends in project management indicates that stakeholder concerns are a neglected area: Themistocleous and Wearne's paper on the coverage of project management in journals makes stakeholder management mention of (Themistocleous & Wearne, 2000), Betts and Lansley's review of the International Journal of Project Management also identifies no coverage of stakeholder management (Betts & Lansley, 1995), and Crawford, Pollack, and England in their paper on the trends in project management research indicate that stakeholder management is an area of decreasing interest amongst published research (Crawford, Pollack, & England, 2006). It is also pertinent to mention that Kwak and Anbari lump stakeholder management with strategy/portfolio management, they therefore indicate that stakeholder management research is on the increase (Kwak & Anbari, 2008). The reader should however be cautioned that Kwak and Anbari's findings assimilate the work of Kloppenborg and Opfer who indicated that stakeholder management was a topic of increasing interest between 1960 and 1999 (Kloppenborg & Opfer, 2002). It is therefore not too clear from Kwak and Anbari as to what percentage of strategy/portfolio management writing included stakeholder management and how much of an increase, if any, was experienced specifically in the area of stakeholder management.

#### 3. Problem Statement:

The standardization effort of the project management associations and associated certification programs imposes a rigid temporal view on projects. This perspective as enforced by the classic 'iron-triangle' conceptualization is a context-less non-subjective ideology. Both project and project management are viewed as limited duration efforts with no historical context and no attention given to a post-project continuity assumption.

It is therefore the contention of this paper that stakeholder involvement prior to project start must be achieved and plans must be instituted to continue stakeholder management post-project termination.

## 4. Example Cases

In this section we will examine a few example cases of the infrastructure developments in the Olympic host-cities with the aim of establishing a context for further discussion. Please note that only the key Olympic Games that decisively altered the landscape for the next games are discussed.

The Olympic Games were revived in 1896 and have been held with regularity every four years (except the 12 year gap between 1936 and 1948). The Olympic Summer Games have progressed from the *mono-stadium* model of the early years to an *Olympic quarter* model (Liao & Pitts, 2006). The mono-stadium model had a focus on the construction of competition facilities, whereas the Olympic quarter model has a broader scope of supportive construction.

The fourth Games in London in 1908 are characteristic of the mono-stadium model. The White City Olympic Stadium was built to host the Olympics with no further improvements or changes made to the wider urban infrastructure. The mono-stadium model was quite successfully used and remained the dominant paradigm until the 1960s. The 1908 London Olympics is significant in that it is reflexive of stakeholder concerns post-Olympics, the White City Olympic Stadium was ill conceived and proved difficult, because of its multi-functionality, to comfortably accommodate all sporting events in one architectural solution (BBC, 2009; Henry & Yeomans, 1976; Liao & Pitts, 2006; Muñoz, 2006). Olympic developments in the 1910s to 1920s began to slowly intrude upon the host city infrastructure. The games were no longer just limited to the stadium but monuments and landmarks celebrating the event also became a part of the urban fabric. It is also to be noted the stakeholders (the next Olympic host-city) learned from the mistakes of the London event and ensured not to repeat the same mistakes in the Stockholm (1912) games.

The 1932 Los Angeles Games signifies the beginning of the Olympic quarter model. The 1936 Berlin Olympics marks the consolidated trend for the development of facilities forming an Olympic quarter (cf. Liao & Pitts, 2006). These included improvements to roads and creation of a purpose built Olympic village complete with housing and training facilities for the athletes. As the Second World War ended London had to rely on existing facilities for the 1948 Games. However, with the Helsinki (1952) and Melbourne (1956) Games began the process of assimilating Olympic construction with urban planning and development (Muñoz, 2006). The impact of the Games became far reaching and longterm. Designers, planners and developers now had to question how the facilities will be used after the games concluded. As Hiller cautions us, the Olympics represent both urban opportunities and urban liabilities (Hiller, 2003).

The 1964 Games held in Tokyo were harbingers of the paradigm of the Olympics as a catalyst for major urban change (Liao & Pitts, 2006). Tokyo took the opportunity of Olympic related development to improve its war-torn infrastructure, building bigger roads, improved public transport and water supply systems, landscaping and street lighting (cf. Henry & Yeomans, 1976; Liao & Pitts, 2006; Muñoz, 2006). Primarily, the city used the opportunity to provide an improved infrastructure for its inhabitants for years to come.

Other cities have tried to follow in the footsteps of Tokyo but, aside from providing decorative features, have been unsuccessful in integrating the Olympic developments with urban planning. The 1968 Mexico Games is a good example, where the city placed newly built and refurbished avenues in strategic places across its urban landscape but was unable to implement a successful urban transport system to support the games (Liao & Pitts, 2006; Muñoz, 2006).

The 1972 Games in Munich were based on a centralized approach and built on a derelict 280-hectare site that the city had previously earmarked for the development of a sports and entertainment center. Because of the Olympics the speed of development increased and Munich was successful in implementing its strategy (Liao & Pitts, 2006). However, because of the terrorist incidence at the Games the centralized approach taken by Munich was highly criticized.

The 1976, the Montreal Games set the tone for modern day Olympic development. The city Mayor envisioned the Montreal Games to be a representation of the nationalistic spirit and struggle of the Québécois. However, because of lack of federal financial support, the idea was to promote a 'modest, self-financing' Games. Existing facilities were refurbished and reused, and like the Munich Games a site previously earmarked for development was chosen for the main stadium. There were several changes proposed to the initial plans by the International Olympic Committee (IOC) in light of the security breach of the Munich Games. From the onset of development, the implementation of plans was plagued with problems. The design of the main stadium by Robert Tailibert, was considered too complex by many and could not be completed in time (Liao & Pitts, 2006; Muñoz, 2006). There were problems with the labor unions and also lax project management issues. The Games were held in an incomplete stadium with a missing roof. In the end the Games left the city of Montreal with a \$2 billion (Canadian dollar) debt (Whitson, 2004).

## 5. DISCUSSION

It should be evident from the discussion above that the Olympics related developments are no longer simple construction projects. Rather, they invade the urban landscape of the host-city, consume tax payer dollars, disrupt daily routine life, and improve the infrastructure through successful and sustainable development.

Fiascos such as the Montreal and Mexico Olympics have increasingly made the IOC more cautious. The IOC reflects this concern and places the burden on the host-city to provide a legally binding contract that it will provide and ensure the proposed infrastructure for hosting the Olympics. Although not explicitly mentioned in the IOC's Olympic Charter, the Games are increasingly awarded to only the world's largest cities as they have the required resources to cope with hosting the Olympics and sufficient population thresholds to sustain the viability of the facilities in the long-term after the Games are over (Liao & Pitts, 2006).

Associated with the Olympics is a considerable list of stakeholders. These stakeholders may be directly involved in the Olympics and related activities or they may be passively effected by the Games. Capturing the concerns of all of the stakeholders is a difficult activity and organizations rarely attempt to reach all of the concerned, a common approach is to identify a representative sample of stakeholders. However, as we have seen from the definition of a stakeholder by the standards making bodies in the BoKs, project management concerns itself with capturing the requirements of the stakeholders in relation to the project. An example is the London 2012 Games the London 2012 website identifies the following stakeholders "...LOCOG, Mayor of London, the British Olympic Association, the British Paralympic Association and other Government departments and relevant bodies - on preparation of the Games" (London 2012, 2009). As is evident the concern is preparation of the Games (i.e. the project only). Sustainability is another concern post-Montreal Olympics. The London 2012 Games has been divided into five key areas: combating climate change, reducing waste, enhancing biodiversity, promoting inclusion, and encouraging healthy living. No mention is made of how the existing facilities will be used or sustained financially after the games (London 2012, 2009 see the London 2012 Sustainability Policy).

Following a limited strategy of stakeholder involvement creates a chasm between the requirements and concerns of the project and the community at large (see Figure 1).

As Figure 1 shows that at the initiation of a project the stakeholders are identified and the requirements of a representative sample are captured. As the project progresses the configuration gap between project actuality and stakeholder expectations increases. This continues until we reach the end of the project, where a big chasm between the expected outcome and actual outcome is realized. The issue that remains unanswered is what should happen after the end of the project. Who shall be responsible for managing the concerns of the

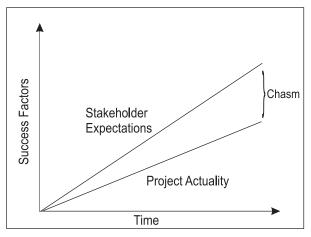


Fig. 1: Stakeholder expectation chasm

stakeholders' post-project termination? If the stakeholders concerns are not managed post-project termination a crisis situation can arise.

In Figure 2 we shows that the project stakeholder concerns continue to increase post-project termination and need to be managed effectively (please assume the absence of project or company intervention).

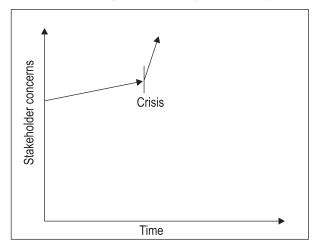


Fig. 2: Post-project termination stakeholder concerns

This situation can be improved if an alternative ideology is pursued where the interface between project termination and post-project termination is properly managed. In Figure 3 we present an alternative model to project stakeholder management post-project termination. We contend that envisioning a project as a 'temporary organization' as proposed by the Scandinavian school or as a temporary onetime activity as proposed by the BoK is appropriate in that it allows us to focus our attention on project activities. However, we extend the argument that was started by Matt Engwell (see Engwall, 2003) that projects are not exclusively outside the domain of an organization and any actions that take place within a project have implications on the complex social fabric of interactions, resources, values, and players.

We add that projects are not simply entities that reside between the boundary of a beginning and an end, but rather that we carry with us 'project baggage' from project to project. What we mean by 'project baggage' is habits (both good and bad) and lessons learned from previous and existing projects to the next. The stakeholders, project organization, project management, project management team, and project workers are not memoryless. We all carry with us experiences from past projects and these contribute to the complex fabric of a project.

Referring again to Figure 3, we can see that stake-holders concerns need to be managed before, during and after the project. Perhaps, if the project is treated as a temporary endeavor then we require a non-temporary setup within the organization to ensure the interface between the project start and end and to ensure continued stakeholder management throughout the organization's life. If left unmanaged stakeholder concerns will continue to rise and will very rapidly violate the upper-bounds of the stakeholder tolerance threshold causing a crisis situation. This case is apparent in the Montreal Olympics and also in the incidence of Shell's Brent-Spar.

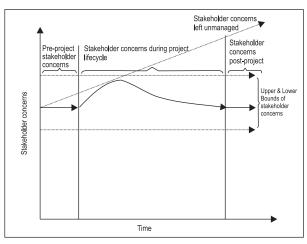


Fig. 3: Unmanaged stakeholder concerns

The interaction of stakeholder and project is a platform for complex interactions. By complexity we mean that the system produces undetermined responses. As such, we can never be clear as to how the stakeholders will behave or how the project will respond to such behaviors. But we can define lower and upper threshold of stakeholder tolerance. Upper bounds clearly represent a situation beyond which the stakeholder will initiate corrective measures. The lower bound is more difficult to define it points to a certain threshold of complacency amongst the stakeholders. This level signifies a point beyond which the stakeholder indifference and inaction begins to convert to concern and action.

## 6. Stakeholder Management Framework

The discussion so far has established that the existing model of stakeholder management in projects is

not adequate and its failure is attributed to its inherent limitations. Therefore, it is appropriate to propose a new framework of stakeholder management that shall be a better fit between the organizational level and project level concerns of the stakeholders. Our framework ensures that projects stakeholder management is not treated as a limited time and memory-less activity. The proposed framework provides opportunities for organizational memory to be reflected in the project dynamic and vice versa.



Fig. 4: Proposed Stakeholder Management Framework (adapted from: Tushman & O'Reilly, 1997)

At the center of the framework are the three phases (pre-project, project and post-project) through which the stakeholders concerns need to be aligned and managed along with the project concerns. Surrounding the concerns we have organization and project level strategies, these provide governance and guidance on how the lower level concerns will be aligned together. The next level encompasses factors that drive both organizational and project strategy. These factors, and many others, contribute in complex ways to the project dynamic and should be taken into account when designing strategies. On the outside we have the environment in which the project and organization function. The environment is where we also find a unique type of a stakeholder, the 'natural environment'. This stakeholder is unique in that it does not represent itself but has various self-elected individuals and organizations speaking on its behalf. This adds to the complexity of stakeholder management as these individuals will have different interpretations of what is best for the environment. Additionally, these representatives will vary on a scale of flexibility from ultra-rigid to slightly-concerned. Such considerations should inform the stakeholder management effort as it is implemented within the organization.

The boundaries between the working of a project and organization are grey to nonexistent when looked at in a holistically. Perhaps, the only difference between an organization and project is the limitation of time. Organizational memory is pervasive through the above

framework and we feel can not be, and should not be, separated between project and organizational workings. Organizational learning is contained within the people that comprise the organization and assigning an employee to a project means that he carries with him the past experiences, biases, preferences, tools and techniques and methods that he uses within the organization. This imposes an additional burden on the stakeholder management process as some stakeholders will bring what we earlier termed 'project baggage' to the projects from projects and organizations very dissimilar from the current project and organization.

# 7. CONCLUSION

In this paper we have presented a case for an improved stakeholder management framework. The history of project management was explored to create a context and background understanding of the evolution of project management. Certain factors which have played a considerable role in shaping the field of project management were clearly identified. The key schools of thought that have influenced the developments in project management since its beginning are the bureaucratic and scientific schools of thought. It is relevant to point out that these schools of thought have influenced projects positively in that they have provided optimization, efficiency, governance, and structure to the project. negatively in that the way these ideologies are used by the standards making organizations has severely limited the development of the profession since the 1970s. In this light a framework for stakeholder management was proposed.

Future work: Alternative perspectives and cross disciplinary studies can contribute positively to the understanding of projects. There is a great need for empirical research in the discipline of project management and stakeholder management is one neglected area that can stand to gain for a pragmatic research methodology. It would be interesting to examine working projects to better understand and improve on the model presented in this paper.

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