**Participative project management as a comprehensive response to postmodernism criticisms: The role of communication**

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Abstract

Purpose – The main purpose of this article is to understand the philosophical changes which underpin research and practices in project management. This study is an attempt to challenge previous studies that have tried to explain this change, in order to provide a better explanation.

Design/ methodology/ Approach – The authors adopt a critical review research method to challenge previous explanations of the paradigm change, and definition of communication. For this purpose, philosophical and social theories and concepts have been used.

Findings – This paper proposed changing the paradigm from modernism to postmodernism and the paradigm shift, which happens from postmodernism to participation, as a better explanation for the paradigmatic change in project management. Furthermore, the important role of communication has been illustrated in the participation paradigm.

Originality/ Value – For the first time in project management, the authors attempt to clarify the role of power in this paradigmatic shift, especially because this concept is an axial concept in postmodern philosophy and a neglected concept in project management literature. In addition, communicative action theory has been used with the aim of pursuing the influence of informal power in the participation paradigm and paving the way for confronting its emerging challenges in future studies.

Keywords – Modernism, Postmodernism, Participation, Paradigm, Power, Communicative action.

Paper type – Literature review

1. Introduction

Some researchers have tried to explain changes that have occurred in project management studies and practices (Hållgren, 2012, Ingason and Jónasson, 2009, Kwak and Anbari, 2008, Floricel et al., 2014, Soderlund, 2004, Packendorff, 1995, Gauthier and
some of them explained these changes from a philosophical point of view, using the paradigm concept (Pollack, 2006, Hoorn and Whitty, 2014, Smyth and Morris, 2007, Luc Lalonde et al., 2010, Biedenbach and Jacobsson, 2016, Biedenbach and Müller, 2011). In Kuhn’s view, the scientific paradigm is a ‘universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of practitioners’ (Kuhn, 1996). In other words, the paradigm is a collection of conscious and unconscious assumptions that, for a certain period of time, shapes a researchers’ and practitioners’ worldview in different areas. However, this concept was raised in the philosophy of science, but in many types of research in project management, is used without enough attention to its philosophical roots (Qi and Chen, 2014, Tanaka, 2014, Zhang, 2013, Yang et al., 2015). Nowadays, there is a common belief amongst the project management community regarding the profound change in project ontology that underpins research and practice (Gauthier and Ika, 2012, Biedenbach and Müller, 2011), but there are different interpretations that explain this change. On the one hand, the multiplicity of explanations are very beneficial but at the same time can lead to some kind of ambiguity in project management research, and consequently, practice. Therefore, it is vital for us to make a continuous effort to propose an explanation with more internal consistency and external extensiveness. Internal consistency revealed itself to have fewer principals, roles and of course, contradictions. By external extensiveness, we mean it can encompass a large number of phenomena in project management practices, with minimum exceptions. Previous studies revealed the fact that many types of research in project management suffer from research method contradictions (Smyth and Morris, 2007, Gauthier and Ika, 2012). We strongly believe the root of this defect has been derived from unawareness or ambiguity in
the philosophical stance of researchers, because it leads to ontological, epistemological and methodological disorder (Biedenbach and Jacobsson, 2016, Biedenbach and Müller, 2011, Gauthier and Ika, 2012, Sandberg and Alvesson, 2011), and has high capacity to create other problems. It also has a crucial role in a new approaches to project management, because, in contrast to the old approach: in the new approach, theoretical bases have an important role in directing research and practice (Walker and Lloyd-Walker, 2016, Turner, 2016). In other words, by moving project management to achieve its mature position, the attention of researchers and practitioners are attracted to the importance of its theoretical foundations (Luc Lalonde et al., 2010, Soderlund, 2004, Bredillet et al., 2015).

Although previous studies have made a very important contribution to extending our understanding of project reality, we strongly believe that some important aspects are neglected, that prevent us from knowing more about what happens in the project context. For this reason, we attempt to propose a more suitable explanation for underlying changes in project management studies and practices. For this purpose, this article is organized as follows (Fig.1); after explaining the research method, we focus on some important research that has paid special attention to explaining the paradigm change in project management. Then, we propose some important criticisms of these explanations, in order to demonstrate how all of them have neglected some fundamental aspects. To provide a better explanation, we refer to the most important criticisms of postmodern philosophy (second paradigm) against modern philosophy (first paradigm) in four selected dimensions of project management. Within this framework, we will also show how these criticisms are derived from centralized power
and why participative project management (third paradigm), through the distribution of formal power as a central concept in postmodern philosophy, has been successful in providing a comprehensive response to postmodern criticisms in practice. Then, we will draw the attention of the reader to newly emerged challenges to the participation paradigm, by providing further explanations of the concept of power, and how formal power has been replaced with informal power in the participation paradigm. After a discussion about the crucial role of communication in the participation paradigm, we will show how the current, prevalent definition of communication in project management is the most important reason preventing us from dealing with a wide range of problems that we are faced with, due to the destructive role of informal power in communication. By using Habermas’ communication action theory, we will show how informal power emerges in communication amongst project participants. In order to deal with its challenges, we need to change our perspective towards communication and try to achieve a better understanding of its hidden aspects in future studies.

**Figure 1: Research process**
2. The research questions

In this paper, in the first steps, the authors tried to answer the question; how has participative project management successfully provided a comprehensive response to postmodern criticisms? The authors achieve this by resolving the role of formal power in these changes. Then, in order to trace the influence of power (informal power) in the participation paradigm, we attempt to answer the second question; how does informal power emerge in the participation paradigm?. The answer to this question draws the attention of the reader to the roots of a new, emerging challenges in the participation paradigm.

3. The research method

The main aim of this research is to provide a better explanation, in comparison to previous explanations, for what we call a profound change in project management. To achieve this goal, and based on rethinking project management network advice, a critical evaluation of previous studies and using philosophical and social findings is necessary, in order to go one step further (Cicmil et al., 2006, Floricel et al., 2014, Geraldi and Söderlund, 2016, Hoorn, 2016, Hoorn and Whitty, 2014, Walker and Lloyd-Walker, 2016, Walker and Crawford, 2016). For this purpose, and based on Grant and Booth’s (2009) classification of review articles, in this paper, we have chosen ‘critical review’ as our research method; ‘critical review aims to demonstrate that the writer has extensively researched the literature and critically evaluated its quality. It goes beyond mere description of identified articles and includes a degree of analysis and conceptual innovation...The resultant model may constitute a synthesis of existing models or schools of
thought or it may be a completely new interpretation of the existing data’ (Grant and Booth, 2009).

In this regard, we followed the following table;

Table 1: Critical review dimensions (Grant and Booth, 2009)

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<th>Search</th>
<th>Appraisal</th>
<th>Synthesis</th>
<th>Analysis</th>
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<td>Seeks to identify most significant items in the field</td>
<td>No formal quality assessment. Attempts to evaluate according to contribution</td>
<td>Typically, narrative, perhaps conceptual or chronological</td>
<td>Significant component: seeks to identify conceptual contribution to embody existing or derive new theory</td>
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Based on previous studies in postmodern philosophy, the first author was able to trace the influence of postmodern criticisms against modern philosophy in project management literature. What motivated us to continue our research was that these criticisms in project management literature are often raised, without enough attention being paid to its philosophical foundations. Furthermore, they are named with different titles that, whilst not incorrect, don’t specify the roots of these criticisms. Therefore, we focused on relevant literature in both project management and philosophy-sociology. In this regard, the most important related articles in project management were detected based on keywords search such as ‘modern’, ‘postmodern’, ‘ontology’, ‘epistemology’, ‘methodology’, ‘philosophy’, ‘rethinking project management’, ‘paradigm’, ‘participation’, ‘communication’, and ‘power’ in search engines. Then, by analyzing their abstracts, some of the results were selected for critical analysis of content, especially those articles with a remarkable focus on the changing paradigm of project management and related philosophical arguments. In addition, some other important articles that had been cited by eminent researchers were added to this collection. In fact, the article selection process had an evolving nature, based on the results of the analysis, similar to what we see in grounded theory (GT) and labeled theoretical
sampling. In addition, in the domain of philosophy and sociology, some other important sources were studied and we tried to achieve a better understanding of this philosophical change and its relation to what we find in project management literature. For this purpose, we concentrate on the 'communication action theory', ‘speech act theory’ and different studies that have been completed, that focus on the concept of power in postmodern philosophy, especially those arguments that have been raised in the texts of Michel Foucault and Friedrich Nietzsche.

4. Paradigm change explanations in project management literature

Cicmil et al (2006) refers to a fundamental change from model-based or instrumental theory toward praxis-based theory. They believe we need to move from traditional project management toward ‘more development which focuses on practical action, live experience, quality of social interaction and communicative relating, operation of power in context, identity and the relationship between agency and structure in project management’ (Cicmil et al., 2006). Pollack refers to this theoretical change by hard and soft paradigms idioms, a hard paradigm has some characteristics such as ‘predefined goals’, ‘no need for participation’, ‘project manager as expert’, ‘positivist and realistic philosophies’, ‘emphasis on control’, ‘quantitative measures’, ‘reductionist techniques’, and ‘emphasis on structure’. On the other hand, in a soft paradigm, opposite characteristics prevail, such as; defined ambiguous goals’, ‘emphasis on learning’, ‘project manager as facilitator’, ‘need for participation’, ‘emphasis on social process’, ‘interpretive philosophy’, and ‘qualitative measure’ (Pollack, 2006). Hoorn and Witty (2014) explain this change by referring to the changing paradigm from Cartesian to Heideggerian ontology (live experience), they believe ‘projects are not just simple
systems processing input into output, but rather a complex network of equipment, interconnected roles, motivations, behaviors, and omnipresence of each participant’s past and future, at every given point (Hoorn and Whitty, 2014). Therefore, they tried to reconceptualize some project concepts through Heideggerian philosophy, as an eminent postmodern philosopher. For example, they made a clear distinction between project management and project managing, that is an emphasize on the uniqueness of each project (Hoorn and Whitty, 2014). In other research, Hoorn tried to explain this change by concentrating on the two broad philosophical viewpoints - continental philosophy and analytical philosophy. The author strongly believes that continental thinking can provide a new insight into the context and live experience of project phenomenon. She created some concepts in continental philosophy in order to pave the way for the future application of this approach in project studies and practice (Hoorn, 2016). Geraldi and Soderlund (2016) demonstrated this change in five directions of project management. These five directions had already been proposed by the Rethinking Project Management Network in 2006. They also added the sixth direction; ‘reflective and engaged scholars’. What makes this study important is that we can follow how the philosophical categorization of knowledge, proposed by Jürgen Habermas in his book Knowledge and Human Interests (1968), has had an impact on types of project research (Geraldi and Söderlund, 2016). Another study explained this change by emphasizing the ineffectiveness of decision-rationality norms and by highlighting the necessity of using social theories with the aim to respond to numerous shortcomings that have been revealed in different areas of project management (Floricel et al., 2014). Gautheir and Ika (2012) tried to demonstrate how project management has changed in two
important ontological dimensions. Firstly, moving from ‘being ontology’ to ‘becoming ontology’, and secondly, by moving from ‘external from cognition’ to ‘fruit of cognition’, and based on these two dimensions, they determined the position of four schools of thought in project management, including premodern, modern, postmodern and hypermodern (Gauthier and Ika, 2012). Svejvig and Grex (2016) illustrated unique aspects of Danish Rethinking Project Management (DRPM). This rethinking movement has some unique characteristics compared to well-known re-thinking project management. Firstly, as the authors explained, this rethinking movement has emerged from industry, therefore, it reflects ontological and epistemological changes that occurred in project practice. Furthermore, there is more emphasize on lean thinking, agile thinking, and leadership (Svejvig and Grex, 2016), these are critical components in dealing with uncertainty and the complexity of projects in the new world (Turner et al., 2016, Geraldi and Söderlund, 2016). Finally, it is important to refer to the Biedenbach and Muller (2011) study, as they examined research that was published by the IRNOP conferences, from a paradigmatic perspective. Their evaluation showed a significant dominance of the research paradigm which is based on subjectivity, interpretivism, and use of case study methodologies, together with qualitative methods. They also emphasized that, articles with a positivistic approach have increased in this journal. This is in contrast to the International Journal of Project Management, where the reverse is true, because positivist approach is dominated approach in this journal (Biedenbach and Müller, 2011).
5. Important criticisms of previous explanations

Previous studies have used different idioms for explaining the paradigm change in project management. We believe that no matter what we call this change, the important issue is to be aware of its roots, so as to achieve a better understanding and explanation of what we are witnessing in research and practice. This recognition also facilitates the creation of a fundamental research question, known as problematization versus gap spotting, as a key strategy for positioning the field of project management in the future (Sandberg and Alvesson, 2011). Although a limited number of previous studies refer to modern and postmodern concepts, for explaining this change in an appropriate way and extending our understanding of project management beyond traditional approaches, neglecting the concept of power as a pivotal concept in postmodern philosophy prevents these studies from explaining a very important dimension of what we are seeing in a project management context and live experiences of project practitioners. Furthermore, and as a result of previous issues, the participation paradigm as the third paradigm is a neglected paradigm, even though it has huge potential to explain fundamental changes in research and practice. Because the participation paradigm is similar to modernism and postmodernism, it has had a dramatic effect on different areas of project management, such as defining project success criteria; project management education; project delivery systems; project management research methods; project organization structure and decision-making processes; human resource management and team building; project financing, and so on. Moreover, we suggest participation as the third paradigm, because the distribution of formal power leads to the emergence of participation and enables us to provide a comprehensive
response to postmodern criticisms. As it can be understood from this statement, what makes this study different from previous ones is that we are trying to maintain the integration of discussion, through concentrating on the concept of power (Formal and Informal) as a critical concept in postmodern philosophy. Furthermore, it is important because, despite the success of participative project management in many aspects, it is still confronted with some challenges of informal power, that need to be addressed. Therefore, focusing on the concept of power not only provides a valuable explanation for what has happened in project management, that has led to the emergence of the participation paradigm but it also sheds some lights on the challenges of this new paradigm. In this regard, by using communicative action theory proposed by Jürgen Habermas, we draw the attention of researchers to the important role of informal power in communication. In fact, this theory helps us to pursue the role of power in participative project management, because based on social theories, communication is a central coordination mechanism in any participative social activities (Schützeichel, 2004).

In the framework of recent discussion, criticisms toward previously completed research can be summarized in five main points:

1- Although many researchers have been influenced extensively by modern and postmodern schools of thought in their endeavor to explain paradigm changes in project management, they don’t refer to them. Furthermore, this approach leads to a disconnection of project management literature from its philosophical foundations, that reveals itself through an inconsistency of explanations. For example, one study extensively discussed changing paradigms from Cartesian to Heideggerian, but didn’t
provide a clear explanation of the relationship between these two eminent modern and postmodern philosophers and their schools of thought.

2. Previous research projects do not realize the important role of power in the paradigm change in project management, whilst the concept of power is a central concept in postmodern philosophy and much criticism against the modern school and specifically, modern project management, as shown in next section of this paper, has derived from this concept. Therefore, taking a focus on the concept of power is not a choice but a necessity in the search for a more comprehensive and persuasive explanation.

3. Although a practical use of participation is becoming more common in many areas of project management, previous studies don’t consider this important change. Probably these errors occur because the studies neglected the above-mentioned items. Simply put, participation is a response to centralized power through the distribution of it. Currently, there is little debate about the relation of the participation paradigm to previous paradigms, from a philosophical perspective. More indepth analysis about this change, by focusing on the concept of power, is not only a prerequisite for a better understanding of reasons that make this new paradigm prevalent but it will also help us to understand its position to holistic change in project management and enables us to provide better responses to the new challenges it has to face.

4. By evaluating previous studies, some researchers refer to the important role of communication in participative activities, but we can’t find any research that provides an explanation for the destructive role of informal power in communication.
In our view, this has occurred because the social and philosophical dimensions of communication in project management has been neglected. When formal power is distributed among stakeholders in the participation paradigm, communication is replaced with central power and upgraded to its position as the main coordination mechanism. Based on philosophical and social studies, communication is the most suitable place for the emergence of informal power, especially when the absence of formal power creates a more favorable condition for the occurrence of such an event. Therefore, it can influence the coordination rate of stakeholders. In fact, the problem is still the problem of power, but informal power.

5- Evaluation of the literature revealed that whilst the participation paradigm provides valuable progress in dealing with modern project management challenges, but it has to face new emerged challenges, such as:

- The complexity of coordinating a large number of stakeholders with the same level of power and diverse demands and benefits, that leads to an increase in time spent on the project and an increase in costs (Zhang, 2013, Ng et al., 2012b, Taylan et al., 2014, Cano and Lidón, 2011, Yang et al., 2015).
- The stakeholders’ demands and needs are not stable during the project lifecycle (Cano and Lidón, 2011).
- Power-based communication (Informal power) of stakeholders in order to influence decision-making process (Badir et al., 2012).
- The inability of participants from different aspects, to reach effective participation (Taylan et al., 2014, Yang et al., 2015).
- Inefficient and weak participation mechanisms.

These challenges are the high priority subjects in participative project management, and yet, there is no comprehensive research that addresses them, probably because it is not
yet recognized as the third paradigm. In addition, without a clear understanding of philosophical foundation of this paradigm, effectively confronting its challenges would be impossible.

6. Postmodern criticisms and participative project management

Criticisms of modern project management cover a wide range of areas, for example financing and even education methods [Ramazani and Jergeas, 2015](for more information refer to the IJPM special edition; ‘Excellence in teaching and learning project management’), but in this paper, we are not able to give a comprehensive picture. Therefore, we briefly concentrate on four selected dimensions, which are not completely separated dimensions with clear boundaries. This is because we are focused on one integrated phenomenon that we call it project. Historically, under the influence of the modern paradigm and specialization, we separate project management into multi-dimensions, in order to study in depth and track progress. These four selected dimensions are shown in Fig.2 and Table.2. The table helps us to pursue the footprints of postmodern criticisms. It is important to note that, as postmodernism is based on intellectual foundations, it doesn’t provide any comprehensive theoretical or practical response to the shortcomings of modernism [Malpas, 2002], but it has revealed what is problematic about it in an effective way. Therefore, in this section, we analyze the 4 selected dimensions we have proposed respectively, scrutinizing the defects of the modern paradigm and resolutions that participative project management provides for each one, through the distribution of formal power.
6.1. Project delivery system

6.2. Modernism and traditional project delivery system

A project delivery system is a comprehensive collection of factors and processes used to manage, finance, design, and construct a project. Project delivery systems establish guidelines for risk allocation, commitments and contractual responsibilities, separating out a project’s entities. Currently, the problems with traditional project delivery systems, which separate the two phases of design and build, have been revealed to experts (Mihic et al., 2014). The separation of design and build has led to destructive bureaucracy and an increase in time and cost. Moreover, it can also reduce quality and often leads to hostile relations between project entities (Jones, 2014, Mihic et al., 2014, Hale et al., 2009). The effects of the modern paradigm in traditional project delivery systems is recognizable; a scientific approach that appears in management as scientific management (Taylor, 1911) and emphasizes specialization and the division of labor, as guiding principles. The modern paradigm gives prominence to specialism and the division of responsibilities, which are there to provide strict control mechanisms on project processes by using concentrated power. Historically, (before the modern age), the design and build elements of construction projects were not separate entities. At the same time, the economic recession in 1920 led to criticism of modern economics (originally established by Adam Smith) and full privatization as its key characteristic. Keynes, and to a lesser degree, Neoliberal economists stressed the necessity of limited government intervention in the economy (Keynes, 1936, Braedley and Luxton, 2010), which has had a significant effect on financing and project delivery systems.
6.2.1. **Participative project management and integrated project delivery (IPD)**

The participation paradigm in the realm of project delivery systems has manifested itself into integrated project delivery (IPD). This delivery system is based on the early contributions of experts and stakeholders. In addition, project teams are guided by the

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<th>Project management paradigms</th>
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<td><strong>Project delivery system</strong></td>
<td><strong>Modern paradigm</strong> 1-Separation two phases of design and build based on specialization principle of science and division of labor. 2-Privatization and emphasize on private financing according to Adam Smith economics. <strong>Postmodern criticisms</strong> 1-Separation of design and build phase leads to increased cost, time, bureaucracy, hostile relations, and unsatisfactory quality. 2-Criticisms of privatization, because of 1920 economic recession and necessity of limited intervention of government according to Keynesian and Neoliberal economics. <strong>Participation paradigm</strong> 1-Integrated Project Delivery (IPD) emphasizes on the integration of people, system, operation, business structures and also on the share of risk and gain. 2-P3 and P4 template for projects as a participative (private-government sector) financing and project delivery system.</td>
</tr>
<tr>
<td><strong>Project success criteria</strong></td>
<td><strong>Modern paradigm</strong> 1-Predefined success criteria based on iron triangle. 2-Minimalistic participation in defining success criteria. 3-Stability of success criteria during project life cycle. 4-Similarity of success criteria in different kinds of projects. <strong>Postmodern criticisms</strong> 1-Different stakeholders have different perception of success. 2-every project is a unique phenomenon with different success criteria. 3-Success criteria commonly change during the project life cycle, based on internal and external changes. 4- Postmodern challenged success criteria from moral standpoint. <strong>Participation paradigm</strong> 1-All stakeholders to protect their benefits, should participate in defining project success criteria. 2- Stakeholders participation should be preserved during the project.</td>
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<tr>
<td><strong>Organization structure and decision-making process</strong></td>
<td><strong>Modern paradigm</strong> 1-Concentrated power and central decision making. 2-abstruse decision-making process. 3-Rigid control process. 4-High formality. <strong>Postmodern criticisms</strong> 1-loss of creativity and innovation. 2-slugghish decision-making process. 3-Increased hierarchly and bureaucracy. 4-poor employee motivation. <strong>Participation paradigm</strong> 1-Distribution of power according to stockholder position. 2-Transparency of the decision-making process. 3- Emphasize on internal control instead of external control through motivation. 4-Less formality.</td>
</tr>
<tr>
<td>Research method</td>
<td>1-Positivist approach 2-Reductionist techniques 3-Quantitative approach 4-Researchers separate themselves from practitioners in different ways. 5-Less consider context and human aspects.</td>
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principles of trust, transparent processes, effective collaboration, open knowledge sharing, team success tied to project success, shared risks and rewards, value-based decision making, and utilization of full technological capabilities and support. This is turn, provides an opportunity to design, build, and operate as efficiently as possible (AIA, 2014, Zhang et al., 2013). The validity of this approach can also be seen in sustainable HOPSCA projects (hotel, office building, ecological park, shops, convention centers and high-grade apartment) by mobilizing the proactive participation of stakeholder groups such as owners, developers, designers and contractors (Zhang, 2013, K. Fageha and A. Aibinu, 2013). On the one hand, we can clearly see the impact of Keynesian and Neoliberal economics on the emergence of P3 projects, which have determined the necessity of participation and the optimal allocation of risks and benefits between private and public sectors (Hua jin and Zhang, 2010, ke et al., 2010, Liu and Suzanne, 2013, Chang, 2013, Abednego and Ogunlana, 2006, Khadaroo, 2014, Chung et al., 2010). Other studies of this project delivery system have demonstrated the necessity of the direct participation of people in this system (Ng et al., 2012a, Mok et al., 2014, Di Maddaloni and Davis, 2017). Furthermore, It has been shown people participation has an important role to play in increasing effectiveness and efficiency and helps to decrease any social risks of renovation and rehabilitation projects in urban
decay areas (Pares et al., 2012, Rios-Carmenado et al., 2014, Liu et al., 2015). Therefore, participative project management provides a solution to the postmodern criticisms in the area of project delivery system.

6.3. Defining project success criteria

6.3.1. Modernism and ambiguity in defining project success criteria

Making that distinction between successful and unsuccessful projects has become a key challenge in the domain of project management. This challenge is clearly visible in defining project success criteria, project success factors and the distinction between ‘project success’ and ‘project management success’ (Linden and Parker, 1998, Jonasson and Ingason, 2013, Turner, 2009, Anderson et al., 2006). The turning point for these criticisms can be found in a book published by Jonasson and Ingason. After their extensive review of previous studies, they cast doubt on them from an ethical point of view and recommend that the distinction between successful and unsuccessful projects is widely related to the ethical school of project participants, accordingly: ‘Derived from what we already know about utility theories, we recognize that project success will inevitably have to have both subjective and objective measures; it will also inevitably mean different things to different people’ (Jonasson and Ingason, 2013). Within this framework, we can also define secondary success criteria, which are sometimes more important than the primary ones, such as corporate reputation and image. Kerzner believes that success criteria can change along the project life’s cycle, and sometimes, in different phases of the project, we have to focus on different project success criteria (Kerzner, 2013). What we have in fact found, is that we are no longer able to distinguish between a successful and an unsuccessful project, unlike in previous times. Therefore,
we can better now recognize the importance of what we have lost due to the criticisms of postmodern critics. Any challenges in this area can lead to widespread practical and theoretical problems in other areas of project management (Turner, 2009). Furthermore, without clear criteria and aims it is impossible for us to make a comprehensive evaluation of our investigative and practical efforts. With the modern paradigm, the success criteria are commonly defined by powerful individual or coalitions, which consciously or unconsciously often show little or no regard for the interests of others.

### 6.3.2. Participative defining of project success criteria

The participatory approach deals with new world complexity, uncertainties, and ambiguities that originate from postmodern criticisms, by creating some kind of stability, by ensuring a relative consensus amongst project participants with regards to controversial topics (Tanaka, 2014, Walker et al., 2017). Participative project management believes that project success criteria should be defined by all the project’s participants (Kerzner, 2013). In this manner, participants defend their interests appropriately, and are responsible for their contributions. Of course, we all consciously or unconsciously, give priority to our interests over those of others. This seems like a simple proposition but extensive debates surrounding the philosophy of utilitarianism uncover its underlying reasons and hidden aspects (Mill, 2002, Jonasson and Ingason, 2013). In addition, another important issue that must be considered is that every project is a unique phenomenon with unique success criteria. Not only do all projects have to meet the iron triangle (triple restrictions) but they should also be in line with the strategic objectives which are determined by the corporation and the
customer’s expectations as important stakeholders (Patanakul et al., 2012, Anderson et al., 2006, Thamhain, 2007, Geraldi and Söderlund, 2016).

6.4. Organizational structure and decision-making process

6.4.1. Modernism and up to down decision-making process

It is widely acknowledged that decision-making is one of the most important responsibilities of a manager (Drucker, 2002). The power relations that exist in all project organizational processes dramatically affect decision-making. Power in a philosophical
Figure 2: Comparing modern and participation paradigms (Authors)

sense is known as a milestone in organizational theory (Ott et al., 2011). In the realm of project management, a project's reality encompasses the understanding of the 'lived experience' of organizational members, with work and life in their local project environments. Decisions and behaviors are understood as being embedded in and continuously re-shaped by local patterns of power relations and communications.
inter-subjective interactions in real-time (Cicmil et al., 2006). Postmodern researchers believe that the concentration of power in an organization leads to a loss of creativity and innovation of project team members, which are essential elements for dealing with complex projects (Turner et al., 2016, Peiró and Meliá, 2003). Furthermore, it can lead to slow decision-making due to organizational hierarchy, bureaucracy, limited communication and interaction between project participants and lack of trust between them (Badir et al., 2012). Further still, in the domain of human resource management, it can lead to a decrease in employee motivation and can increase unethical behaviors in managers (Bredin and Soderlund, 2011, Pollack, 2006). In this regard, Stephen Pryke believes ‘Much of our thinking in management and project management terms has been constrained by boundaries imposed by classifications that are artificial and unhelpful. Work packages, project phases, contracts and subcontracts, projects and programs are all artificial constructs that help us to understand and manage some aspects of our projects but prevent us from analyzing and improving systems in other respects’ (Pryke, 2012).

6.4.2. participative decision-making

Research studies and experiences in different disciplines of humanism and social sciences demonstrate the catastrophic impact of focused formal power (Hossain and Wu, 2009, Hayes, 2010). Essentially, the major philosophical reason for the emergence of the participation paradigm is restraining the focused power and its negative consequences through the effective presence of all project stakeholders (Bredin and Soderlund, 2011). In this regard, participative management was labelled democratic management (Zulch, 2014), and participation principles have been widely emphasized
in project, program and portfolio standards (PMI, 2013; OGC, 2011). Stakeholder’s participation in the decision-making process not only ensures their commitment to the decisions, but also it is a vital motivation mechanism. In addition, this approach fosters and develops a stakeholders’ talents for creating innovative ideas and solutions to problems that they have already participated in identifying them.

6.5. Project management research method

6.5.1. Modernism and positivism approaches to project management researches

The modern paradigm in the area of project management research methods has shown itself through a positivist approach, with an emphasis on quantitative analysis of data and reductionist techniques (Pollack, 2006, Smyth and Morris, 2007, Hoorn, 2016, Neuman, 2009). These manners allow researchers to separate themselves from research context in different ways (Soderlund, 2004, Biedenbach and Müller, 2011), similar to what can be seen in science. They always attempt to keep a predefined distance between themselves and people in the context of the project through the level of knowledge, responsibility, kind of behavior, etc. It is, of course, an inevitable path in quantitative research methods. This approach works very well when trying to investigate a topic that is free from human values, emotions, norms and other unknown contextual variables. Therefore, the results can be generalized to other cases and situations. However, as postmodernism criticism has shown, this separation in research - that the human mind plays a very important role, and influences different managerial procedures can lead to large amounts of missing information and unrealistic results (Corbin and Strauss, 2007, Neuman, 2009, Gauthier and Ika, 2012). In fact, many
researcher's interpretations of context is at a huge distance from those of the practitioner in the field of study (Morris, 2010). This approach prevents the researcher from capturing a correct understanding of complex social and power relations among different actors belonging to the project. For this reason, researchers are left with little choice except to impose their previous conscious and unconscious mental structures to the field of study. In turn, this can prevent them from taking into account the interests of other stakeholders. Therefore, the use of research results into practice has had to compete with resistance imposed upon it by stakeholders. Furthermore, the results may have been impacted by the subjective interests of a small number of stakeholders, and possibly by the pre-existing convictions of the researchers and in this way, do not reflect the actuality of the situation (Cicmil et al., 2006, Hodgson, 2006, Thomas, 2000).

6.5.2. Participative research method

It has been suggested that the participative research method offers an effective strategy in dealing with previous shortcomings in the area of project management. In this manner, the researcher does not try to overcome the research process and is less tempted to drive the project data or results in a particular direction but in fact let them to emerge the reality of the project context. For this purpose, research team comprised of researchers from a university, plus other project members from different backgrounds have a shared and deep understanding of what is happening within the project. They collaborate with each other to achieve a mutual understanding of the project’s actuality, and particularly through the sharing of data, shape a clear picture of the project (Geraldi and Söderlund, 2016, Hoorn, 2016, Hälgren et al., 2012, Morris, 2010, Dalcher, 2016, Hodgson and Cicmil, 2016). In this way, we can’t define any
specified distance between the researcher and the project’s stakeholders in the context of the research. From a philosophical point of view, there is no clear distinction between the subject and the object. It is an important feature that distinguishes postmodern philosophy from modern philosophy. Therefore, from the beginning of the study, researchers are not only separate from others, but they also try to break different, pre-created physical and mental borders with the aim of achieving a deep understanding of social and political relations among practitioners (Winter et al., 2006), that is closer to the project reality (Walker and Crawford, 2016). This aim isn’t possible without ‘empathetic relationships’ – to achieve an equal position with other project members (Weber, 1954, Neuman, 2009). The level of achievement in this line depends entirely on the quality of the participation, mutual trust, and good communication amongst the different participants. Furthermore, in this approach, the conscious and unconscious mental structures of the researchers and any other actors will be limited, before any special pre-structures are imposed upon the results of the study. There is a collective, conscious attempt by all participants to allow information and the actuality of the project to emerge unprompted by anything, as we see in Hermeneutic phenomenology and Grounded theory (GT) (Glaser and Strauss, 2005, Corbin and Strauss, 2007, Creswell 2012). Finally, the research results will only be applicable to a limited number of projects within a specified context and with specified actors. Therefore, researchers haven’t tried to create universal laws that can be successfully applied to different projects (Gicmil et al., 2006, Luc Lalonde et al., 2010, Floricel et al., 2014).
7. Future of participation paradigm

7.1. Paradigm changes and position of power

As shown in the previous section, the majority of criticisms that have been raised by postmodern critics derive from the concept of power. Power is a central concept to the philosophies of Friedrich Wilhelm Nietzsche and Paul Michel Foucault, both eminent thinkers of the postmodern paradigm. Therefore, to provide a deeper understanding of postmodern criticisms in the area of project management, it is crucial for us to concentrate on the effect of power, directly, instead of its consequences. In the following section, we try to explain more about this concept and how formal and informal power are distinct from each other. Firstly, it is important to note that, power is meaningful when an actor (individual) is acting in relation to other actors. Consequently, power is nonsensical concept for an isolated actor. Based on Max Weber's definition of social science ['an action is 'social' if the acting individual takes account of the behavior of others and is thereby oriented in its course' (Weber, 1954)], we should consider power as a social concept, similar to communication, as another important notion in sociology. The word power refers to one actor’s potential to influence others to behave in line with his/her wishes (Ferris and Treadway, 2012). Although there are different classifications of power and even different interpretations of each category, one of the most well-known of them was developed by French and Raven (1959). They identified five sources of social power: coercive, reward, legitimate, referent, and expert (French and Raven, 1959). Subsequently, Raven added a sixth source, described as informational (Raven, 1965). Moscovici (1984) emphasized that it is necessary to make a distinction between power and its influences, and Hardy and Clegg (1996) pointed out that the
power resource lists could be infinite and these sources something refer to a specific context (Peir and Meli, 2003). Generally speaking, in the context of our own research, we took the assumption that power can be divided into two broad categories: formal and informal. Formal power has one or multiple sources outside the actor, for example, an actor’s organizational position. However, informal power stems from the actor itself, such as knowledge, popularity, verbal communication skills, emotional intelligence, etc. In practice, these two types of power have a very complex relationship, therefore, it is very difficult to make a clear distinction between their sources and influences. By and large, in terms of influence, the exertion of formal power is perceptible and tangible for the actors themselves and leads to changes in their behaviors in accordance or in contrast with their beliefs and values. Meanwhile, the exertion of informal power is commonly related to the unconscious part of the mind which is inaccessible but widely affects the attitudes, values, and emotions of an actor in an unrecognizable manner. Hence, the informal power is more effective for the actor who wants to affect and change others in a more stable and long-term manner. As a simple example, in a project meeting, one actor could influence another by using complex (professional) words which other members of the team may not understand, in order to influence on the unconscious part of their minds. Actors might do this with the intention of penetrating their minds in order to influence their decisions, instead of using logic and reasoning to support their point of views. In fact, with this technique, actors use a psychological trick instead of logical reasoning to win arguments. This phenomenon may occur as a very complex process because, as explained above, formal and informal power have very close relations with each other and actors are quite impressed by the long history of
relations among present actors and even by their complicated coalitions which are constantly changing. In many leadership guidelines, in different fields of management, the influence on others through psychological techniques is a known and accepted method. The postmodern school believed the majority of values, behaviors and even aesthetics are determined by complex power relations (Nietzsche, 2014, Nietzsche, 2012, Foucault, 1995, Foucault, 2006). The main reason that caused a distinction between formal and informal power is that most criticisms that have been raised by postmodern critics against the modern paradigm in project management it is derived from formal power, and the participative paradigm is an attempt to provide a comprehensive response to these criticisms. Informal power and its positive or negative role, is still a neglected issue in the body of project management literature. Lee and et all (2015) demonstrated how participation provides a wide spectrum of benefits for both the project team and the organization, such as knowledge sharing, increased customer responsiveness, a reduction in the amount of re-work; and increased innovation. However, the quantitative analysis of data revealed that the most important intrinsic and extrinsic motivational drivers for an individual, in order to participate, are enjoyment and reputation (Lee et al., 2015). This result clearly illustrates that we are confronting very complex psychological and social phenomenon. In fact, we should try to answer this question: what is it that allows project team members to enjoy participative works? The answer to this question can be found in the complex, informal power relations amongst project stakeholders because, reputation is one source of informal power. In fact, power can, simultaneously, take both a positive and negative role in participative activities. Therefore, dealing with it can prove to be very difficult.
In summary, we can trace the root of postmodern, multi-dimensional criticisms in the concept of power. The dominant minorities define project success criteria in accordance with their obvious and hidden benefits but participative project management has shown that the participation of stakeholders can restrain this unbridled power to create balanced interests among all project parties, and this participation inherently protects this balance during a project’s life cycle. In the area of project delivery systems, integrated project delivery distributes power among all project parties, to create a sense of belonging for all of them, through sharing risks and benefits. Moreover, it prevents the mediational role of client or owner as a key source of power, and merges the design and build phases. In organizational structure and decision-making processes, the distribution of power between all stakeholders leads to more innovative work, faster decision-making and most importantly, the motivation of all project participants. In addition, power distribution is one important factor in new research methodologies in project management. In this regard, researchers should not impose their assumptions or specific thought patterns to objects that are under study. Rather, they should adopt a participative approach with an empathetic manner that leads to the emergence of a ‘live experience’ of a project team, as if it were actually taking place.

As explained earlier, the changing paradigm, from modern to participation has led to distribution of formal power as the main coordination mechanism in the modern paradigm. Furthermore, there are more complex power relations that commonly stem from informal power and emerge through communication, which is the main coordination mechanism in participation paradigm (Fig.1). Therefore, the issue is still the problem of power, but informal power. In the following sections, to further explain
the above statement, firstly, we show the role of communication in the participation paradigm, then, we discuss the fact that the current definition of communication in the project management literature, prevents us from understanding its function appropriately. Therefore, to deal with this issue, we try to clarify the role of informal power in communication, through philosophical and social findings.

7.1. Participative project management and the role of communication

Any participation widely depends on the quality of communication. we can't imagine participation without communication(Adnan et al., 2012, Tam et al., 2006, Shelbourn et al., 2007, EL-Saboni et al., 2008, Tai et al., 2009). When considering project management standards, especially OGC standards, it is clear that the authors have made the connection between stakeholder engagement (participation) and communication, but the quality of the relationship isn't clear. Sometimes, stakeholder engagement is assumed to be equivalent with effective communication((OGC), 2009, (PMI), 2013). In summary, the correlation between engagement and communication is identified, but its quality is still ambiguous. Some studies have been conducted that seek to clarify this relationship. One study illustrated the fact that communication should be considered a reason for trust(Shelbourn et al., 2007), and it has been demonstrated that mutual trust among project participants leads to effective participation (Hoseilalipour et al., 2013). Furthermore, it has also been revealed that the most important factors to improving managerial ability, in order to reach project success are ‘Strong project commitment’, ‘early stakeholder influence’, ‘stakeholder endorsement of project plans’ and ‘rich project communication’. In addition, this research revealed that quality project communication has a great impact on other factors(Anderson et al., 2006). Chaster Bernard believed that in the
exhaustive theory of organizations, communication would occupy a central place because the structure, extensiveness, and scope of the organization will almost be determined by communication techniques (Barnard, 1938, Henderson, 2004). Likewise, John Naisbitt believed that future competition will be managerial competition, and the competition among organizations will be focused on effective communication among the members of the organization and external organizational members (Tai et al., 2009). Previous research taught us that in innovative organizations, successful managers create the sense of community among all members of the project team and for this purpose, all communication barriers should be removed (Thamhain, 2007). These results are in accordance with sociological findings, that showed communication has a very important position in sociology studies (Schützeichel, 2004, Habermas, 1984, Weber, 1954, Luhmann, 2012). This leads to important consequences in project management as communication achieves the highest position, because if we consider project reality as a temporary community of individuals, working towards achieving predefined goals (Florice et al., 2014, Lee et al., 2015), then the organizational life of any human being largely depends upon the individual capability to communicate with others (Zulch, 2014). Therefore, the investigation focused on communication achieves a central place in the participation paradigm.

7.2. *Current approaches to communication in project management*

The definition of communication in project management is largely based on the Shannon and Weaver (1948) model, known as a traditional model of communication. According to this model, communication is a physical channel of data transfer (Shannon and Weaver, 1971). Therefore, the social and psychological aspects of communication have been neglected, similar to what we see in much of the project management
literature (Badir et al., 2012, Park and Lee, 2013, Bond-Barnard et al., 2012, Tam et al., 2006, Tai et al., 2009, Adenfelt, 2009, Reed and Knight, 2009, EL-Saboni et al., 2008, Henderson, 2004). However, there are a limited number of studies that challenge these shortcomings (Henderson, 2004, Reece and Brandt, 2005) and in some research, communication is exclusively assumed to be a tool to affect other actors (Park and Lee, 2013, Tai et al., 2009). A study completed by Bond-Barnard et al (2012) concerning project and program communication should be mentioned as one of the most rewarding studies, that revealed challenges to and ambiguities concerning the current definition of project communication. The authors of this study referred to the importance and complexity of the social and psychological dimensions of communication but inevitably reverted to the traditional definition of communication, due to the absence of coherent literature concerning the right approach to project communication (Bond-Barnard et al., 2012). Zick and Anderson believed that project communication is commonly assumed to be a timely and appropriate means of delivering information and this leads to an ignorance of the natural and humanistic aspects of communication in projects (Zick and Anderson, 2015). In this regard, Adenfelt produced a research study on transferring knowledge in transnational projects. The response of the respondents to this study were published in this article and revealed the idea that communication doesn’t only mean transferring information by using tools and instruments. In reality, the communicative action of a project team fundamentally and thoroughly changes the participants’ circumstances (Adenfelt, 2009).

7.3. Philosophical and social approaches to communication

Considering a project’s reality as a temporary community facilitates the use of sociological and philosophical findings to achieve a better explanation of different
aspects of a project. In this regard, and with attention to the second part of the research question, by using communicative action theory we clarify the relationship between communication and informal power, that is a neglected issue in project management literature. In this way, we can follow the role of informal power in the participation paradigm (Fig.1). According to communicative action theory, human action can be divided into two categories (Fig.3). In the first kind of action, we are interacting with an objective world or physical environment. For example, when we clean a desk we are interacting with the objective world. In this situation, all actions are surrounded by the laws of the physical world. In the second category, we are interacting with other individuals or other minds, we are doing something within the laws of the social world (norms, values, etc.). Language has a very critical role to play in this kind of situation. This action, by itself, can be divided into two categories; ‘strategic action’ and ‘communicative action’. In the first category, we consider another people as our objective world, in fact, we use language with the intention to influence others (exertion of informal power). In order to achieve a better understanding of the role of language in strategic action, we should concentrate on an important theory in philosophy of language known as ‘speech act theory’, it allows us to understand this phenomenon more clearly. This theory creates a great transition in the philosophy of language and the mind. However, in this paper, it is impossible for us to consider all dimensions, so, in summary, a speech act is an utterance that has a performatative function in language and communication. We perform speech acts when we offer an apology, a greeting, a request, complaint, invitation, compliment, or refusal. In fact, we are doing something with known or unknown external influences. Therefore, language
can be recognized as a potential means for using power (Austin, 1975, Searle, 1969). We often use this inherent capability in our language to put pressure on others: in this kind of action we assume others as an objective world and we use language with this assumption. However, we are not always aware of that. In fact, in this situation, we are using strategic action with the intention to put pressure on and influence other actor’s minds, to overpower them, change their decisions, or even desires. Conversely, in communicative action, we have an awareness of the social world and we adopt logical reasoning, instead of domination, to resolve disagreements. As a simple example, in project meetings or negotiation, we don’t use our university degrees or reputation as sources of power, and don’t use speech act capability in our language with the aim of creating a coalition against other stakeholders, to put psychological pressure on them and change the psychological atmosphere in our favor. Instead, we refer to acceptable and understandable statements with the intent to resolve disagreements through taking into account the interests of all parties. Based on the Karl Popper definition of three worlds (1978), Habermas developed three kinds of actions that we perform under the communicative action simultaneously, accordingly, we use normative action (to confront social and objective worlds), expressive action (to confront subjective and objective worlds) and communicative action (to confront subjective, objective, and social worlds). In this definition, the subjective world refers to the internal mental world of any individual. Of all these, communicative action has become known as an original kind of communication (Habermas, 1984). Contrary to what it seems, social and psychological studies show that arriving at such situations isn’t a simple process and requires two-way communication using semantic elements (Habermas, 1984), common
knowledge background, mutual trust, communication style arrangement (Sarhadi, 2016), and other unknown variables. Informal power has been considered as a very complex concept in philosophy, correspondingly, providing a solution for dealing with it in project communication would be very difficult. This research is the first step to achieving a better understanding of informal power in project communication. The second step is creating innovative strategies and tactics that can help communication to play its coordinating role effectively in the participation paradigm.

Figure 3: Types of action in communicative action theory (Schützeichel, 2004)
8. Conclusion

In this paper, we tried to provide a better explanation for fundamental philosophical changes which underpin project management studies and practices through a concentration on the concept of power as a central concept in postmodern philosophy. In this regard, we demonstrated the emergence of the participation paradigm is in fact a comprehensive response to the postmodern criticisms from the modern paradigm. This explanation not only encompasses some important aspects of previous research but also provides a more logical, philosophical foundation for the future development of participative project management, that has logical coherence with what has happened so far in project management studies and practices. In the modern paradigm, centralized power has taken a coordinator role in project teams by establishing a communication bottleneck, but in the participation paradigm, information flows freely among all project team members. Therefore, focused power is replaced with effective communication (Peir and Meli, 2003). Communication is most favorable place for the emergence of informal power, and project management literature has neglected this important issue. Therefore, dealing with participation challenges seems to be impossible without extensive research on the role of communication in project management. In this paper, we tried to shed some light on this phenomenon, through philosophical and social theories. For this purpose, we demonstrated that the communicative action theory of Jürgen Habermas can provide new insights into the exertion of informal power in project communication. Based on Jürgen Habermas’ explanation in his interesting book ‘The Theory of Communicative Action’ (1981), participants in communicative action try to reach an agreement instead of overcoming
each other. Communication in such conditions plays its coordination role in the most effective way. Achieving an insight into this situation is most probably a very intricate process and needs more research to be conducted. It is not plausible and reasonable to eliminate informal power from relations between participants because it is a very important, motivational factor but it is possible to lower the exertion of power at least in a way that leads to an optimal point, with the least amount of conflict among project team members. To achieve high performance project teams in complex projects with a multicultural context, communication must be delivered in a way that causes effective participation of team members and in a broader perspective, all project stakeholders (Badir et al., 2012).

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<table>
<thead>
<tr>
<th>Search</th>
<th>Appraisal</th>
<th>Synthesis</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeks to identify most significant items in the field</td>
<td>No formal quality assessment. Attempts to evaluate according to contribution</td>
<td>Typically, narrative, perhaps conceptual or chronological</td>
<td>Significant component: seeks to identify conceptual contribution to embody existing or derive new theory</td>
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<tr>
<td>selected dimensions of project management</td>
<td>Project management paradigms</td>
<td>Postmodern criticisms</td>
<td>Participation paradigm</td>
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<tr>
<td><strong>Modern paradigm</strong></td>
<td></td>
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<tr>
<td>Project delivery system</td>
<td>1-Separation two phases of design and build based on specialization principle of science and division of labor.</td>
<td>1-Separation of design and build phase leads to increased cost, time, bureaucracy, hostile relations, and unsatisfactory quality.</td>
<td>1-Integrated Project Delivery (IPD) emphasizes on the integration of people, system, operation, business structures and also on the share of risk and gain.</td>
</tr>
<tr>
<td></td>
<td>2-Privatization and emphasize on private financing according to Adam Smith economics.</td>
<td>2-Criticisms of privatization, because of 1920 economic recession and necessity of limited intervention of government according to Keynesian and Neoliberal economics.</td>
<td>2-P3 and P4 template for projects as a participative (private-government sector) financing and project delivery system.</td>
</tr>
<tr>
<td>Project success criteria</td>
<td>1-Predefined success criteria based on iron triangle.</td>
<td>1-Different stakeholders have different perception of success.</td>
<td>1-All stakeholders to protect their benefits, should participate in defining project success criteria.</td>
</tr>
<tr>
<td></td>
<td>2-Minimalistic participation in defining success criteria.</td>
<td>2-every project is a unique phenomenon with different success criteria.</td>
<td>2- Stakeholders participation should be preserved during the project.</td>
</tr>
<tr>
<td></td>
<td>3-Stability of success criteria during project life cycle.</td>
<td>3-Success criteria commonly change during the project life cycle, based on internal and external changes.</td>
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<td></td>
<td>4-Similarity of success criteria in different kinds of projects.</td>
<td>4- Postmodern challenged success criteria from moral standpoint.</td>
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<tr>
<td>Organization structure and decision-making process</td>
<td>1-Concentrated power and central decision making.</td>
<td>1-loss of creativity and innovation.</td>
<td>1-Distribution of power according to stockholder position.</td>
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<td>2-abstruse decision-making process.</td>
<td>2-sluggish decision-making process.</td>
<td>2- Transparency of the decision-making process.</td>
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<td></td>
<td>3-Rigid control process.</td>
<td>3-Increased hierarchy and bureaucracy.</td>
<td>3- Emphasize on internal control instead of external control through motivation.</td>
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<td></td>
<td>4-High formality.</td>
<td>4-poor employee motivation.</td>
<td>4-Less formality.</td>
</tr>
<tr>
<td>Research method</td>
<td>1- Positivist approach</td>
<td>1-There are several realities rather than one, and Researchers’ interprets of reality are far from practitioners.</td>
<td>1-Researcher and practitioner participate in the research process from a relatively equal position with mutual understanding and mutual benefit from outcomes.</td>
</tr>
<tr>
<td></td>
<td>2-Reductionist techniques</td>
<td>2-Positivist and quantitative approach missed some important aspects of information.</td>
<td>2-Participants’ experience, for specific project replaced with universal results.</td>
</tr>
<tr>
<td></td>
<td>3-Quantitative approach</td>
<td>3-Any results depend on context completely.</td>
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<td></td>
<td>4-Researchers separate themselves from practitioners in different ways.</td>
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<td></td>
<td>5-Less consider context and human aspects.</td>
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</table>
Figure 1: Research process

- Literature review on paradigm change in project management
- Research method: Critical Review
- Main criticisms about previous explanations

This research explanation of project management paradigm change

- Modernism paradigm: Existence of formal and informal power
- Postmodern paradigm: Criticize of formal and informal power
- Participation paradigm: Existence of informal power

- Improved participation
- Minimizing power in communication
- Humanities
- Project management
Figure 2: Comparing modern and participation paradigms (Authors).

<table>
<thead>
<tr>
<th>Modern Paradigm</th>
<th>Participation Paradigm</th>
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<tr>
<td>Design-Bid-Build</td>
<td>Integrated Project Delivery</td>
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<tr>
<td>Owner</td>
<td>Owner &amp; End-Users</td>
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<tr>
<td>contractor</td>
<td>Designers &amp; Consultants</td>
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<tr>
<td>Consultan</td>
<td>Builder and Trade Partners</td>
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</tbody>
</table>

### Universal Criteria

- Time
- Scope
- Quality
- Cost

### Hierarchical Structure

- Owner
- Contractor
- Consultant

### Separated Researcher

- Project A
- Project B
- Project C

### Local Criteria

- Strategy
- Time
- Scope
- Quality
- Cost

### Flat Structure

- Owner & End-Users
- Designers & Consultants
- Builder and Trade Partners

### Engaged Researcher

- Project A
- Project B
- Project C
- Researcher
Figure 3: Types of action in communicative action theory (Schützeichel, 2004).