



Theories for classification vs. classification as theory: Implications of classification and typology for the development of project management theories

Pooria Niknazar*, Mario Bourgault

Polytechnique Montreal, Montreal, Canada

Received 13 May 2016; received in revised form 1 November 2016; accepted 7 November 2016
Available online xxxx

Abstract

Although ordering and classification schemes play a crucial role in the project management field, classification as a topic of study has been undervalued in the literature. Accordingly, there is a semantic confusion and lack of uniformity about the definitions and theoretical implications of two commonly used terms in project management: *classification* and *typology*. We argue that this issue hinders project management field from developing middle-range theories and flourishing theoretically compared to other fields of research.

In this paper, we clarify the definitions and theoretical implications of project classification and typology so they can be fully used in theory development. We argue that typology – although it involves classification – is different than simple classification schemes. We also explain how theories for classification can be used to delimit project types in homogeneous project categories and develop middle-range theories; however, a typology itself is a unique form of theory that can capture the complex nature of projects. By clarifying these concepts, this paper points to promising directions for future development of theories in project management.

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Keywords: Project classification; Project typology; Middle-range theory; Project management theory

1. Introduction

Since the earliest development of modern theories of project management, which Morris reports as having emerged in the 1940s and 1950s (Morris, 1994), the classical project management literature has advocated a universal theory of and approach to project management, under the assumption that all projects have the same structures and processes. However, Shenhar (2001) suggests that there is no single “theory of project management”, and there is little evidence in practice that an ideal model exists for all project types (Cicmil and Hodgson, 2006). Moreover, several other prominent authors (Koskela and Howell, 2002a; Maylor, 2001; Morris et al., 2000; Winch, 1996) have emphasized the need

to introduce alternative theoretical approaches to the study of projects instead of searching for a single project management theory. However, only a few studies have examined the behaviour of projects in theoretical terms (Lundin and Söderholm, 1995; Söderlund, 2004, 2011b). That is a major reason why the project management literature “suffers from a scanty theoretical basis” (Shenhar and Dvir, 1996, p. 607).

Nonetheless, the discipline has developed some building blocks to help shape its theoretical foundations (Jugdev, 2008). Many schools of thought/perspectives have been introduced, and these vary in terms of how they look at the nature of projects and the type of theorizing they engage in (Bredillet, 2007b; Söderlund, 2011a; Turner, 2006a; Winter and Szczepanek, 2009). Although the existence of these diverse views shows that pluralism is growing within the field, Söderlund (2011b, p. 57) argues that that “too much fragmentation hinders the communications among scholars

* Corresponding author.

E-mail address: polyponik@gmail.com (P. Niknazar).

and ultimately leads to failure of knowledge sharing and accumulation". He concludes that some kind of unification is also necessary in order to better understand the phenomenon under study and improve the language that we use to speak about our common cognitive problems.

The suggested unification of theories implies that project management theorists must be explicit about the project types that they are theorizing about, regardless of the theoretical schools of thought/perspectives they apply, the problems concerned or the different phases of the project life cycle examined (Söderlund, 2004, 2011a, 2011b). Limiting the theoretical scope to a particular project type is a remedy for a major problem in constructing sound project management theories that has been described as a lack of distinction among project types (Pinto and Covin, 1989). Moreover, by limiting the scope of the work to specific project types, the project management principles, tools and methods applied are also tailored to the types of projects (Andersen, 2006; Besner and Hobbs, 2004; Turner and Cochrane, 1993). In other words, in the current theoretical landscape of project management, there is a need for more middle-range theories (Packendorff, 1995). Middle-range theories (Merton, 1968) are expressed in similar terms to traditional theories but their scope is limited to a single project type. Nevertheless, a review of the studies that used some sort of project classification reveals two major issues, which we believe are preventing the project management field from fully addressing the need for middle-range theories.

The first issue is the neglect of the essential role of "classification" in delimiting project types. By using a proper classification and construction of homogeneous categories, projects that share a certain degree of similarity in terms of specific features can be considered as a project type. However, this critical step in development of middle-range theories has been overlooked in the project management literature. Although a variety of classification schemes have been used in the corpus of studies (Crawford et al., 2005, 2006), compared to other disciplines, little systematic research has been conducted on project classifications as a separate topic of inquiry. While various project classification schemes have been developed based on in-depth knowledge of projects, few seem to have been drawn based on established theories or explicit classification principles.

The second issue is the inconsistent use of "classification" and "typology" across authors in the project management literature. These two important terms are frequently misunderstood and/or used interchangeably. In particular, there is much confusion about the definition and theoretical implications of "typology". That is why some proposed project typologies are simply classification schemes that present certain mutually exclusive project categories but are not developed into a standard, fully accepted theoretical typology (Doty and Glick, 1994). For example, Evaristo and van Fenema (1999) developed a project classification scheme based on the emergence and evolution of new forms of projects but did not develop it into a typology. Similarly, Blismas et al. (2004) sorted clients' construction portfolios into groups that exhibit similar traits, attributes, or origins, which is better regarded as a classification scheme and not a fully developed typology, which should present some ideal types and explain a dependent variable.

A major reason for this semantic confusion between classification and typology is that most project classifications were constructed heuristically or did not incorporate the progress made by the work of other scientists, in fields such as management and organizational science, who have worked on classification or typological principles for a long time. Given that we are still in the early stages of theory development in project management (Söderlund, 2004, 2011b; Yung, 2015), we believe that disregarding the theoretical implications of typology represents a missed opportunity and hinders project management from undergoing further theoretical development.

To address these two issues, we first clarify the definitions of classification and typology in order to alleviate the semantic confusion that reigns in most of the project management research literature. Because very few project management researchers have defined and discussed these terms, we look at other scientific fields, including the natural sciences and, most importantly, the disciplines associated with management and organizational studies. Our examination of the long history of discussions of classifications and typologies led us to some very influential authors and papers that have generated long and on-going discussions of these concepts. Therefore, our selection of authors was guided not by the criterion of exhaustiveness but by the criterion of relevance.

We will also discuss the implications of classification and typology for the development of theories in project management. We will argue that, with the help of theories for classification, significant aspects of a subject can be selected as the classification criteria and homogeneous categories can be constructed. Next, by building samples from a homogeneous project category, we will be able to delimit a project type and then test hypotheses and develop middle-range theories. This process would provide a guideline for specifying project types and lead to the development of more vigorous and reliable project management theories, albeit theories that are narrower in scope.

Further, we will discuss how the construction of a typology is a valuable and useful way to develop theories in project management. We explain that a well-developed typology must meet the most important criterion of being a theory (Doty and Glick, 1994). We reveal that a typological theory is not similar to traditional bivariate or interaction theories but is regarded as a unique form of theory that incorporates multiple levels of theory — a *grand theory* as well as *multiple middle-range theories* (Doty and Glick, 1994). We will argue that a well-developed project typology has the capacity to capture the complex nature of projects and the various causal relationships involved (Shenhar and Dvir, 1996, 2007). In summary, we argue that:

- Classification schemes are different from typologies.
- A proper classification is a core requirement for the development of middle-range theories.
- Typology itself represents multiple layers of theory.

The insights from this research have major implications for the further development of project management theories. First, highlighting the fundamental – but often forgotten – steps for devising middle-range theories would help project management scholars to generate additive knowledge in more unified, vigorous

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