The changing paradigms of project management

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Abstract

This paper examines the academic literature on Project Management in relation to the hard and soft paradigms, two broad tendencies for thought and action that have had considerable impact on the development of a variety of comparable fields. A critical reading of the literature confirms strong links between the hard paradigm and Project Management. However, it is also demonstrated that undercurrents exist in the literature, which suggest a growing acceptance of the soft paradigm. Models of the field are presented through which the influence of these paradigms on the field can be understood, and a way is suggested in which further developments in the use of the soft paradigm in Project Management could be progressed.
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1. Introduction

Over the last few decades a great deal has been written about the hard and soft paradigms, two broad tendencies for thought which have had a strong influence on the development of a variety of practical and academic disciplines. Previous authors [e.g. 2,8] have stated that the development of Project Management (PM) has been strongly influenced by the hard paradigm. However, there has be little in depth examination of the veracity of these claims in the PM literature.

Others claim that the field of PM currently lacks a coherent underlying theoretical basis [e.g. 17, p. 2; 50, p. 5], that additional theoretical development is needed, and that the general "... conceptual framework is inadequate to the job it should be addressing" [49, p. 31]. Theory in PM is predominantly implicit. Development of an explicit theoretical basis for PM has been heralded as one of the most crucial issues in the development of the profession [11, p. 293]. It has been suggested "... that a paradigm change, long overdue, has to be realized" [11, p. 298].

The purpose of this paper is to explore whether claims regarding the hard paradigmatic basis of PM can be substantiated based on evidence in the PM literature, and to examine how the hard and soft paradigms have influenced, and are continuing to influence, the field. It is also argued that the field of PM may actually be in the process, not of a paradigm change, but an expansion of paradigms that are acceptable and applied within the field.

This paper contributes to development of an explicit understanding of the theoretical basis of PM. Models of the role of the hard and soft paradigms in the field are presented, and some ways in which this paradigm expansion could be further progressed are suggested.

2. The hard and soft paradigms

The term paradigm came into popular usage with Kuhn's (1962) *The structure of scientific revolutions* [3] and can generally be taken as referring to the commonly shared set of assumptions, values and concepts within a community, which constitutes a way of viewing reality. Individuals within the community may embody these assumptions in different ways, and so paradigm is used in this context to refer to a general tendency for thought.

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The terms hard and soft are often inconsistently and ambiguously used in the PM literature [4, p. 645]. For instance, the term soft is often used to indicate a vague focus on people or intangibles. However, in the literatures of some comparable fields the terms hard and soft have more complex meanings, referring to two distinct paradigms, each of which involves particular values, ways of viewing the world and approaches to practice.

The hard paradigm is commonly associated with a positivist epistemology, deductive reasoning and quantitative or reductionist techniques, attributes which are often associated with rigour and objectivity. Practice based on the hard paradigm tends to emphasise efficient, expert-led delivery, control against predetermined goals and an interest in underlying structure.

The soft paradigm is commonly associated with an interpretive epistemology, inductive reasoning, and exploratory, qualitative techniques, which emphasise contextual relevance rather than objectivity. Practice based on the soft paradigm emphasises learning, participation, the facilitated exploration of projects, and typically demonstrates an interest in underlying social process. The relationship between these different attributes and how they interact in a PM context is described in Fig. 1. This figure is a synthesis of the different ways that the hard and soft paradigms have been described in other research [4, p. 650; 76, p. 319; 77, p. 45; 78, p. 290; 79, p. 22].

In many cases, these paradigms have been referred to by the philosophies which underpin them. For instance, the hard paradigm has also been referred to as the rationalistic, positivistic, scientific, reductionist [5, p. 26] or quantitative paradigm [6, p. 46]. The soft paradigm has alternatively been referred to as hermeneutic, qualitative, phenomenological, interpretive, reflective, inductive or ethnographic paradigm [7, p. 20].

However, the philosophical side is only one aspect of these paradigms. Paradigms influence practice in terms of how situations are perceived, what is considered to be of value, and what is viewed as valid and effective action. The influence of a paradigm on practice can be subtle, but it is pervasive, affecting what is done, how it is done and why it is done.

In the field of Systems Thinking it has been demonstrated that different paradigms and methodologies are appropriate for different contexts and effective in reaching different ends [e.g. 43,44,51,67]. In the field of Operational Research practical methodologies based on the hard and soft paradigms are sometimes referred as Problem Solving and Problem Structuring methodologies, respectively [80], names which are suggestive of the different purposes to which these methodologies are put.

The differences between the hard and soft paradigms have varying implications at the levels of theory and practice, and so to understand the influence of these paradigms on PM it is necessary to examine both of these levels (see Fig. 2). Although the terms hard and soft are not unproblematic, they are used throughout this study as they do not place particular emphasis at either the philosophical or the practical level. Further examination of the differences between these paradigms can be found in works by Jackson [8] and Midgley [9] who provide analyses of the influence of these paradigms on the fields of Management Science, Systems Thinking and Social Research.
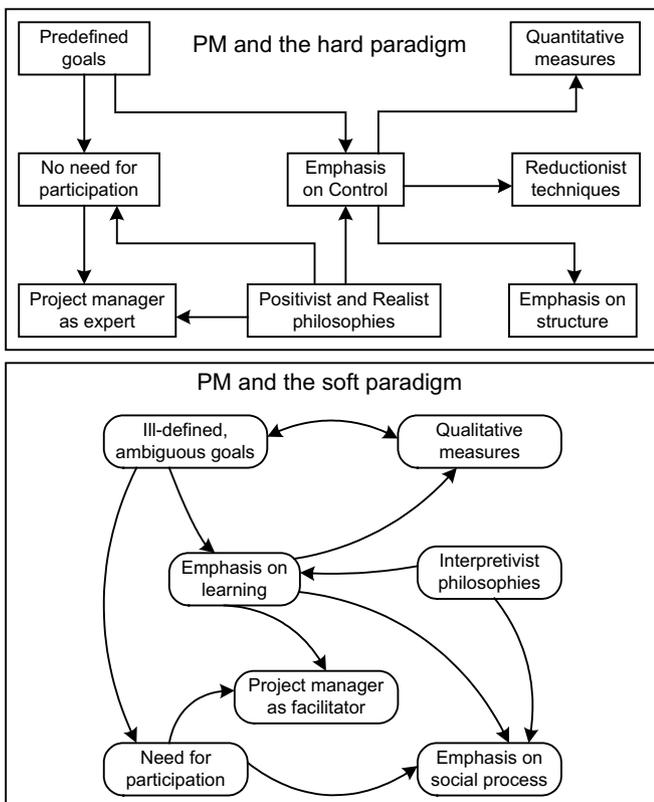

Fig. 1. Interrelationship between the attributes of the hard and soft paradigms.

Fig. 2. The hard and soft paradigms in theory and practice.