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Project conceptualization using pragmatic methods

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Abstract

An important and difficult part of project management is the conceptualization stage – particularly when dealing with multiple powerful stakeholders and 'messy' situations. Pragmatism provides a way forward that makes central the 'concepts' being used to conceptualize the project (e.g. 'timeliness' or 'sustainability'). This paper argues for a sequence of two approaches suggested in the literature that combine this pragmatism and soft systems thinking to conceptualize projects. These are Alexander's 'Synthesis' [1] and Checkland's 'CATWOE' [2]. The first identifies concepts or worldviews, the second uses these to draft a series of 'what needs to be done' statements. In the way of Pragmatic Systems Inquiry, these approaches suggested from the literature are then compared to a real case study: the LC-25 project.

Keywords: Conceptualization; Connections; Ideas; Interrogatives; Project management; Pragmatism

An important and difficult part of project management is the conceptualization stage. How well a project is conceptualized affects how well the project is defined and appropriately scoped. As the project scope is acknowledged as the basis upon which subsequent project management processes and activities are planned and delivered, the conceptualization stage can be seen as central to project management processes. Thus, having a framework on how project managers might approach the project conceptualization process is useful – particularly when dealing with multiple powerful stakeholders and 'messy' situations.

Project management is about resolving a problem need. Dewey [3] argues that problems start with someone having a feeling of unease, or being concerned. It is a long way from articulating this unease to constructing a provisional document to be used by a project manager. Conceptualizing these concerns into provisional instructions, especially for modern complex projects, requires some means of emerging ideas in an environment that can accommodate the almost inevitable conflict between multiple powerful stakeholders. These stakeholders may include the general public, sponsors, buyers, investors, end users, or the project team. Their concerns need to be appreciated and sense-made as part of the idea creation process. Moreover, it would seem to be an advantage if the inevitable conflict involved in doing this could be turned into a creative process.

Pragmatism [4] suggests that conceptualizing some event (activity) involves being clear about what 'concept' is being used to think about that event. For example, project managers might use the concept of 'time' to conceptualize the project. This would encourage the manager to think about deadlines, start time, finish times and task sequences. Using the concept of 'effectiveness' might encourage them to think about outcomes and flexibility. The task of conceptualizing projects therefore comes down to deciding what concepts to use. Fortunately, Miller's magic seven plus or minus two [5] suggests not using too many.

Systems thinking suggests that there is one concept that managers might use to conceptualize projects which offers the advantage of creativity. It is that of 'inter-connections' between ideas thought relevant to the project rather than considering these issues in isolation. For example, thinking

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about a road project in a developing country in terms of its connectivity (relationship) to other projects may result in joint infrastructure between the road and water or solar-energy catchments. Building a new road will help get the crops to market. The water catchments project might be to grow crops and the solar energy might be needed to process the crop somehow. These ideas can be connected.

This paper will argue that pragmatism and systems thinking can be combined to provide a useful approach to conceptualizing projects. It will do this by providing two initially different approaches to connecting ideas from the literature – those of Alexander's Synthesis [1] and Checkland's Soft Systems Methodology [2]. These are then connected to provide a comprehensive approach to conceptualizing projects. Last, a case study of an organization going through the project conceptualization process will be critiqued using the combined approach. First, however, it is thought necessary to briefly provide some background to pragmatic theory of knowledge which suggests identifying which concepts are used to conceptualize activities like the management of projects. It also seems appropriate to provide some background to the 'inter-connectivity of ideas' concept.

1. A project's conceptual frame(s): Pragmatism

The theory of knowledge that centers on conceptualization while seeking useful outcomes is that of pragmatism. Peirce [4] is usually credited with being the first pragmatist. He argued that logical statements are dependent on the concept(ual frame) being used by the writer. They can never be free of any prior conception. Kant and Nietzsche had also argued this. The writer's conceptual frame (perspective, worldview, paradigm) determined what seemed logical. However, it was William James in *Pragmatism* [6], who argued that there is no single correct conceptual frame we should aspire to but many. Understanding within a community depended on accommodating these alternatives. Project conceptualization, particularly in 'front end situation' needs to capture convincing clear objectives. This opens the way to appreciating how to think about the inevitable conflicts of stakeholders that goes beyond the idea that one is right and another wrong.

John Dewey in *How We Think* [3], and others as explained in *The Metaphysical Club* [7], elaborated on this conceptual pluralism. The next generation of pragmatists included Charles West Churchman, with *The Design of Inquiry Systems* [8] and *The Systems Approach* [9]. Churchman's work might be interpreted as starting the process of applying pragmatism (although he did not call it pragmatism) to managerial and architectural project management. His work was further developed by his students [10–14]. As Hookins [15] explains, their approach has been informed by the work of Kant, Hegel, Faucault and Habermas [16], and Rorty [17]. The approach is pluralistic, communal, critical and reasoned, requiring public argument by a community of motivated doubters to justify the usefulness of knowledge claims. It is critical in the sense of wanting inquiry to result in our having new and useful ways to act in the world and define successful projects.

2. Ideas inter-connectivity

The concept of connectivity between two ideas can be seen as similar to the concepts of metaphor, analogy or synthesis; the relationship between two ideas. X is like Y. Dewey [3] makes some effort to distinguish analytical thinking (picking apart) from synthetical thinking (using analogy), calling for both to be used in reflection. He uses the example of considering 'analysis' as reductionism (zoom in); looking inwardly at the problem not outwardly, and dividing the problem into elements (variables) and studying these separately. He uses the term 'picking apart'.' This is the advocated approach of scientific thinking. By 'synthesis', he appears to mean stand outside the phenomenon, see it as an example or subset of some other wider phenomenon (zoom out). Think of analogies to the phenomenon. He uses the example of the historical physics mystery of why suction water-pumps can only suck up to a particular height. Analysis means looking at the water, pump and vacuum, and perhaps at a chemical level. Synthesis means asking what a tube full of unsupported water is analogous to. Dewey [3] argues that synthesis led to understanding there must be some force pushing down on the water to force it up so high thus an appreciation of atmospheric pressure. This synthesis approach therefore suggests that different perspectives on a problem, and consequently a different set of questions about the problem, can be generated by encouraging the problem solver to flip from 'zooming in' to 'zooming out' on the problem domain. This synthesis approach is therefore fundamental to the role of project management in problem structuring, where objectives are often unclear and where different stakeholders have conflicting aims.

Connectivity, 'between-ness' or relationship has long been a perspective recognized for reflecting on social groups and actions [8]. Sociometric networks analysis does this more formally [19]. All of which suggests that we often make use of this particular view of the world. Looking at the relationship between two events, activities or phenomenon in a system would seem to suggest difference as well as similarity, as was recognized in the backlash to the interest in metaphors [20] to see connections between ideas. Contradictions, irony and paradox provide an alternative to the similarities encouraged by metaphors; one that focuses on differences. Reflecting on social phenomena by thinking about the tensions between elements goes back to Marx [21] and has been a recurrent theme of the pragmatic systems thinkers [12]. Contradiction in terms of dialectic argument sweeps in Habermas [16], Rorty [17] and argumentation theory [22].

One context within which some pragmatists, Churchman [9] and Ackoff [10], thought about connectivity was that of 'systems'. A system is a series of connected ele-