

# Errors, lies and misunderstandings: Systematic review on behavioural decision making in projects



Verena Stingl and Joana Geraldi, *International Journal of Project Management*, 35.2 (2017), p. 121-135

## KEYWORDS

- Decision making
- Behavioural decision making
- Project studies

## Article Highlight:

This article is a comprehensive literature review of behavioural decision making in projects, that is, how decision making in projects happens (and why). It covers a summary of the research by organising it into a conceptual framework of three schools of thought.

## What does the paper cover?

The paper presents the theoretical concepts of behavioural decision making in projects as three schools of thought:

- reductionist (cognitive limitations impacting project decisions – errors);
- pluralist (political manoeuvring when framing and negotiating decisions – lies);
- contextualist (social processes involved in shaping narratives and driving the sensemaking process around project decisions – misunderstandings).

The authors link the empirical research in project contexts and the theoretical foundations of behavioural decision making, and suggest future research avenues.

## **Methodology:**

As the literature on behavioural decision making is fragmented, the authors conducted a systematic review to identify and pull together articles which study decision making in project contexts deliberately.

Building on a framework previously suggested to organise the literature on behavioural decision making, the study organised the findings into three theoretical schools: reductionist, pluralist and contextualist, based on the underlying research philosophy. Some of the articles were between schools and therefore a 'mixed school' group was created.

Once grouped, the authors analysed the articles according to three questions:

- **Research problem:** What was the research problem (issue)?
- **Theoretical contribution:** What theoretical explanation was given for the problem/decision behaviour?
- **Practical contribution:** What are the recommendations for practice?

## **Research findings:**

The schools differ in their assumptions of a 'good decision' and therefore their perception of the 'problem' with decisions or the decision process. This reflects the different philosophical foundations of the three schools.

## **Three schools of thought in behavioural decision making in projects**

### **i) Reductionist school in project studies**

The reductionist school builds on the canon of rationality: a rational decision exists and is ideal. In this view, decision behaviour is a deviation from rationality due to the limited and biased mind of individuals.

This school uses mostly quantitative methodologies to search for cognitive biases. The phenomena most commonly explored are escalation of commitment and optimism bias, both of which are widespread challenges in project organisations. Optimism bias is a particularly prevalent theoretical explanation for project decision issues related to overly optimistic forecasts or underestimation of risks. It is an umbrella term for a subset of various cognitive biases like self-efficacy theory, illusion of control, or outcome desirability.

The reductionist school also offers de-biasing strategies to foster forecasts that are more accurate. Through its strictly rational stance, this school provides limited value to decisions that are under high organisational and political influence, and when the 'right decision' cannot be defined, not even post-hoc.

### **ii) Pluralist literature in project studies**

Pluralist research similarly follows the notion of rationality yet identifies the sources of irrational behaviour in individual motivation. Overoptimistic forecasts in this school are attributed to the opportunistic behaviour of individuals and groups, who omit or even falsify information, or exploit information asymmetries and others' biases to win project business,

push personal 'pet' projects, maintain or better their position, or gain access to resources. Thus, pluralist research identifies the roots of this behaviour not in (fallible) individual cognition but in dynamics unfolding within the project and its stakeholders, sometimes fostering a dysfunctional environment. This can evolve to a climate in which organisational pressure suppresses the acknowledgement of ambiguity and uncertainty, leading to the development of 'irrational objectivity'.

A second stream of pluralist research is concerned with negotiations, where failure to balance interests or the adoption of a strongly self-interested strategy can lead to ineffective outcomes and can affect the (perceived) success of projects.

Review of the pluralist school of thought reveals that research analysing the role of power asymmetries in project decision making is scarce, despite politicking and bargaining being a dominant issue in the reality of project practitioners.

### **iii) Contextualist literature in project studies**

The contextualist school breaks with the assumption that there is a single rational and ideal decision and stresses the relevance of the decision context. Using qualitative approaches, this research provides a process view rather than an analysis of the decision as an isolated event.

A key theme in the contextualist literature is the convergence of sense and meaning as an enabler for decisions that the group perceives as 'right' or successful. Specific drivers are the convergence towards a shared vision among the stakeholders, or a process of constant dialoguing among the project team. Consequently, the management approaches focus on steering and interpreting the sense making process.

### **iv) Mixed schools**

The paper presents several case studies that propose how theories from the three schools can be employed to investigate core decision challenges, such as escalation of commitment and competing narratives. While articles in the mixed school present alternative explanations for behaviours in decisions, only a few articles explicitly acknowledge these different theoretical foundations. Yet, these 'mixed schools' papers hint at the potential of researching complex phenomena through multiple theories.

The authors discuss how significantly different philosophical concepts may create conflicts and be incommensurable if not treated and discussed with care.

## **Implications for future research**

Analysis of the literature reveals eight gaps in the research of the individual schools of thought:

- 1.** The research on heuristics should be broadened from a narrow perspective on 'biases' and 'errors' to a more positive perspective. Indeed, cognitive science indicates that heuristics, as mental shortcuts, can be fast-and-frugal modes to deal with high levels of uncertainty and complexity.
- 2.** Most of the research studied failing projects. It would also be useful to study successful projects and successful decisions.
- 3.** Integrating neurosciences into behavioural decision making could advance research in the reductionist school.

4. There is a need for an increased research focus on political manoeuvring and power relations in projects.
5. Overcautious forecasters and project practitioners deserve attention, as well as optimism bias.
6. Research on the role of external and internal influences affecting the project decision maker are lacking.
7. Problems of indecisiveness, delayed decisions, or defensive decision making is under-represented in research.
8. Acknowledgment of different theoretical foundations of articles and their potential incommensurability (lack of a common basis) is crucial.

## Conclusions:

Many of the theories explore, in (unnecessary) isolation, complementary aspects of the same phenomena, such as escalation of commitment or optimism, thus missing the opportunity to explore the full benefits of multi-paradigmatic research.

Future research should therefore aim to build bridges across schools of thought by acknowledging and positioning itself within the foundations and concepts of the different schools. It can do so by actively searching for potential overlaps between schools, while being aware of the potential incommensurabilities when attempting to bridge them.

## Significance of the research:

**For project managers:** the article contributes to making decisions by suggesting how behaviours impact project decisions and by reviewing coping mechanisms offered by the literature.

**For researchers:** the review provides a structured mapping of the research against its respective underlying grand theories, thereby providing a tool for identifying gaps and missing links and suggesting avenues for future research.

## Comments from authors:

This research started with the observation that project practitioners frequently report making decisions, from the sanction of the project to small day-to-day decisions, and yet, we, project scholars, dedicate limited attention to these decisions. So, we started to look at projects as a collection of decisions and an array of questions emerged:

What are these decisions? How do project practitioners make judgements and decisions? Why do they make them as they do? Why is it hard/easy to make decisions? Why do some organisations face high levels of indecisiveness?

We also noted the increasing amount of data available and increasingly sophisticated software used to collect and mine data in project contexts. Following this, we asked:

Do project practitioners design and make sense of large datasets, and if so how? Do the data inform the project decisions? Can artificial intelligence facilitate project decisions?

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This article was the first publication in this stream of work on project decisions. We have since published articles in conferences and some are in the journal review pipeline on related topics: impact of visualisation in triggering over-confidence; cognitive strategies for bid/no-bid decisions; methodological challenges in the study of decisions in projects; contradictions in project decisions; cognition of risks and opportunities, among others.

The original article was an invitation to think broader, to combine theories and explanations, and to get a better grasp on the actuality of project decision making. We want to follow-up this invitation and are looking for organisations and project practitioners who would like to engage in a dialogue about their decision practices in projects, programs and portfolios. Please get in contact with us at [verst@dtu.dk](mailto:verst@dtu.dk) or [jge.ioa@cbs.dk](mailto:jge.ioa@cbs.dk)

## Complete article

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## Glossary:

<b>Escalation of Commitment (EoC):</b>	Where projects are continued even though criteria, such as extreme delays, indicate project failure.
<b>Optimism bias:</b>	The overestimation of positive outcomes and/or the underestimation of potential negative outcomes.

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