Theoretical Perspectives in the PhD thesis: How many?

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Content and purpose of the PhD thesis

- A candidate’s PhD thesis describes the analyses and research processes that led to their conclusions.
- The thesis provides all that is necessary and sufficient for a competent researcher to replicate the research, and to corroborate the candidate's data, analyses, and conclusions.
- A candidate’s thesis must describe the particular perspective and assumptions from which they have built their theoretical analyses, gathered their data, and derived their conclusions.
The Five Chapter Thesis

A modified version of Perry’s 5 chapter thesis model offers a coherent and efficient basis for most PhD level design research.

Ch 1 - Introduction (executive overview)
Ch 2 - Literature review (developing research questions)
Ch 3 - Theoretical Perspectives (choice and justification)
Ch 4 - Data description (describing patterns in data)
Ch 5 - Analyses and conclusions (addressing research problem)
Theoretical Perspectives

- Theoretical perspectives are what researchers use to determine their choice of analyses, background material, theories, data collection methods and other research techniques.

- In essence, a theoretical perspective consists of all the abstract and theoretical factors that shape the sundry decisions that a researcher makes.
Background Theoretical Perspective

- All research theses have an over-arching background theoretical perspective that is used by the researcher. It is the perspective from which the research problem is addressed and the thesis is written.
- In most cases, the main characteristic is that of critical analysis.
- It is important that this background theoretical perspective is maintained by the PhD candidate whilst using other theoretical perspectives that are specific to addressing elements of their research.
Complete Research Perspective

A complete research perspective includes:

- Ontological perspective(s)
- Epistemological perspective(s)
- Theories
- Methodological perspective(s)
- Research methodologies
- Research methods
- Research techniques
Positivism and Design Research

- Positivism is now widely discredited.
- Positivists claimed that the research methods and theoretical foundations of the natural sciences are the only approaches that can be used for research.
- The axioms of logical positivism excluded any subjective or other non-objective aspects of researching, the targets of research, theory, or theory-making.
- Positivism reduced the scope of research and its outcomes to that which is deterministic, quantitative and mappable onto a mathematically definable space.
Positivism: Single Theoretical Perspective

Positivism, the natural sciences and mathematics use single well-agreed and well-understood theoretical perspective. The claim is that being purely objective:

- The theoretical foundations are fixed.
- The epistemology excludes subjective considerations.
- Research methodologies are also objective.

There is, however, an argument that even in this case there are at least two theoretical perspectives because a critical analytical epistemology is required alongside positivism’s scientific perspective.
Theoretical Perspectives: Design Research

Design Research normally requires *multiple* theoretical perspectives because:

- Most design research addresses issues from more than one domain.
- It involves taking into account human and other qualitative issues relating to designing and the use of designed objects alongside the quantitative & objective issues relating to the specification of the designs for objects.
- Design research often requires a variety of data gathering methods to triangulate data.
The complete set of theoretical perspectives needed for most design research projects are:

- A single background theoretical perspective - that used for managing the research and writing the thesis.
- Multiple theoretical perspectives used to address the research problem and the research questions.
- Multiple theoretical perspectives that inform the research methods and techniques used to gather data.
A PhD thesis that attempts to shoehorn design research into a single theoretical perspective is unlikely to be satisfactory for one or more reasons:

- It is unlikely to adequately describe the research undertaken by the candidate.
- It suggests that the theoretical foundations of the research have not been well addressed.
- It is unlikely to make a useful contribution to knowledge because the inherent compromises increase conceptual, terminological and analytical confusion in the field.
Using multiple theoretical perspectives is a skill required of everyone.

Being conscious of, and competent in, the use of different theoretical perspectives, and explaining and justifying one’s choice and application of them is a basic skill required of competent researchers, philosophers, and other professionals involved in analysis and theory-making.
Conclusions

- Design research is likely to require the use of multiple theoretical perspectives.
- PhD theses in design research require the candidate to describe and explain the reasons for their choice of the theoretical perspectives used in their research and thesis.
- PhD research and theses that can be justifiably addressed through a single theoretical perspective are almost certainly not design research. They are more likely best attributed to other domains such as scientific, engineering, informatic or graphic art.