Marketing Faculty & Ph.D. Supervision: A House Divided

Abstract

This article examines the issue of logical paradigms in Ph.D. supervision. It notes that Ph.D. supervision in Marketing is sharply divided into two main schools of thought as to how theory should be developed via the literature review within a Ph.D. thesis. This division is based around the use of the two leading paradigms of scientific discovery, Induction and Deduction. The article describes these two paradigms and then demonstrates how a supervisor who uses inductive logic will tend to allow the candidate to 'discover' their research hypothesis by examination of the literature. A supervisor who uses deductive logic will not allow a review to commence in earnest until a preliminary working proposition has been created. The practical mechanisms and significant implications of these two schools of Ph.D. supervision are fully explained and discussed.

Introduction

The Department of Marketing at the University of Otago has one of the largest Ph.D. programmes in the Southern Hemisphere, with some 30+ students under instruction. These students are supported by a full time faculty of more than twenty. As Director of this programme, I have had considerable opportunity to observe both a variety of approaches to supervision, and the outcomes (both good and bad) of these approaches. I have also taken the opportunities offered by this position to discuss supervisory issues beyond my own department, with both the supervisors and the supervised.

My conclusions are that while each individual supervisor has their own unique 'style', the supervisory approach of the Marketing Faculty as a group can be divided into two distinct 'schools of thought' with very little 'hybridisation' between them. This has, from time to time, given rise to serious issues if a student is unfortunate enough to be co-supervised by a representative of each school! [1]

One would expect such a strong division to have its origins at a very fundamental level, and this does appear to be the case. The definition of a Ph.D. thesis is that it has to make a 'significant contribution' to knowledge in the field. There appears to be unanimity among our faculty that to make a 'significant contribution' the candidate has to test the validity of a 'significant' hypothesis or set of hypotheses by research – and to come up with a more or less definitive conclusion with regard to it[2]. Opinions differ with regard to how the validity of a hypothesis *that is in being* should be tested – but these differences do not show sharp group-based delineations into incompatible or opposed schools of thought – however sharp the individual, methodological differences of opinion may be. The division between the two

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[1] 'Faculty' in this case is applied in a wider context, beyond my own department and to the marketing academy as a whole.

[2] From now on, this article will use the term 'hypothesis' only, in order to refer to either a single hypothesis or group of related hypotheses.

schools of thought occurs a step further back, and it is related to the process by which a 'significant hypothesis' emerges as the principle focus of a Ph.D. thesis, and especially with regard to the role of the literature review in this process.

This article examines the theoretical basis of both of these supervisory schools of thought, and demonstrates how the two approaches work, and how they differ.   The implications of these observations are then briefly examined.

The 'Inductive' and 'Deductive' schools of supervision

Knowledge progresses by the development and testing of theory; and it does so at all levels, from the new-born child to the nuclear physicist. For centuries Science has sought to understand, to formalise and to codify the procedures by which this progress is made. While the Philosophy of Science has thrown up a significant number of mechanisms by which this occurs, two major paradigms - Induction and Deduction, have historically occupied the 'centre ground' of scientific philosophy and practice.   The basic processes of theory development under the two paradigms are shown in Figure 1.

Figure 1: Inductive & deductive reasoning (After Wachtershauser 1995)
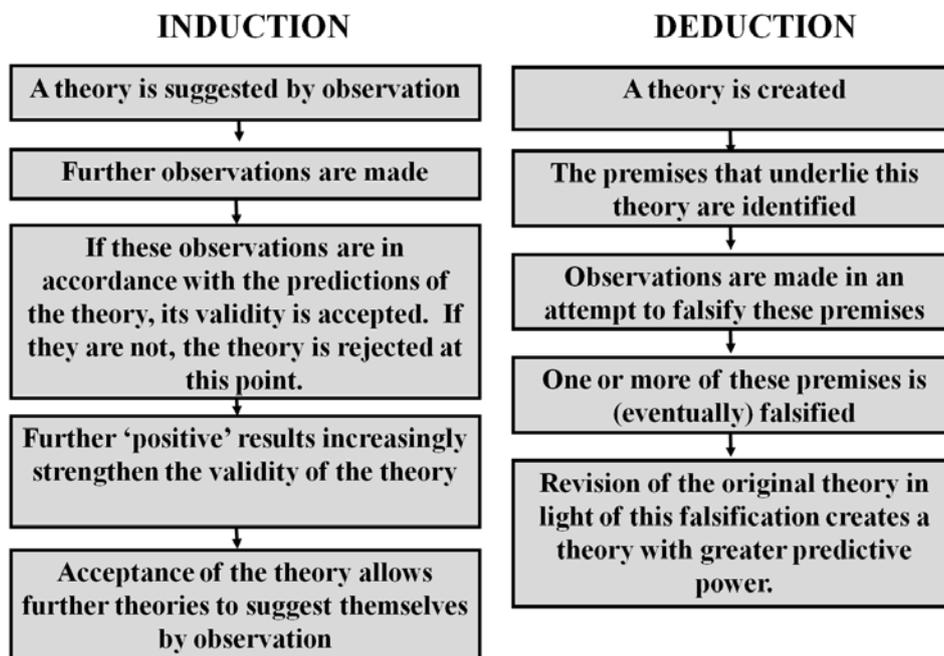
Deduction is most closely associated with philosopher Karl Popper and his work with regard to the logical shortcomings of Induction, which had dominated scientific thought for the three centuries prior to his emergence in the Nineteen Thirties (Popper 1935).   Popper highlighted a number of logical issues with the inductive paradigm, but only one, the primacy of theory, concerns us here.   Popper argued, with Albert Einstein's support (Popper, 2002), that Induction has no definable 'start point'.   The inductive paradigm relies on observation to 'suggest' a theory (the primacy of observation). However, Popper noted that observation will

only suggest a theory if these observations either do or don't conform to an expected pattern. As an expected pattern can only exist if a theory is already in being, an existing theory therefore must precede observation in all cases where a new theory is an outcome (the primacy of theory). Einstein observed that, while the Theory of Relativity superseded Newton's Laws of Motion, the pattern of expectations created by the pre-existing Newtonian theory, and their refutation by observation, were a necessary prerequisite to his 'creation' of the Theory of Relativity.

While the philosophical arguments were settled in Deduction's favour some time ago, both paradigms continue to be deployed within scientific disciplines to test theories. However, it is rare to find any single researcher that will use both. Whether they can articulate their position or not, they will typically consistently follow one theory testing paradigm or the other. Marketing is no exception to this situation, and it is the supervisor's position on the primacy of theory that will dictate how they structure both their own research, and those of the Ph.D. students that they supervise. Unless the student is exceptionally strong willed, they will adopt this approach for the rest of their research and supervisory career - thus perpetuating what is virtually a tribal division.

Marketing's position is particularly difficult as many of our faculty have backgrounds in research fields other than Marketing, and these fields tend to favour one approach or the other very heavily. Researchers having a background in the 'hard' sciences, will tend to be adherents to the deductive paradigm and the primacy of theory, while those whose backgrounds are in the social sciences and the arts will tend to be inductive in their approach and will favour the primacy of observation. As Marketing has recruited more heavily from the arts and social sciences, the 'inductive' faculty are in a majority, and as the approach self-perpetuates by supervision, Induction is therefore likely to continue to dominate into the foreseeable future.

**Inductive and deductive supervision systems in practice**

This difference in position on the primacy of theory leads to profoundly different patterns of supervisory practice. The two patterns are summarised in Figures 2 & 3. To take the dominant, inductive, model first. An 'inductive' supervisor believes that the role of the literature review and the student's reading in this phase of the thesis is to 'reveal' the research hypothesis. Therefore, after a broad field of interest has been identified, the student is launched into the research literature, usually with little guidance, and told to 'read until they see a gap'. This 'gap', once seen and recognised as a potentially significant contribution, is then refined into the research hypothesis, which is then examined and approved by the supervisor, or via a more formal process in a sizeable proportion of departments. The hypothesis may be modified in light of this review. It is rarely rejected, and the student then proceeds to fieldwork. The underlying assumption is that if the student looks at (reviews) the literature for long enough, something will (eventually) suggest itself to them (primacy of observation).

Figure 2: Inductive pattern of supervision
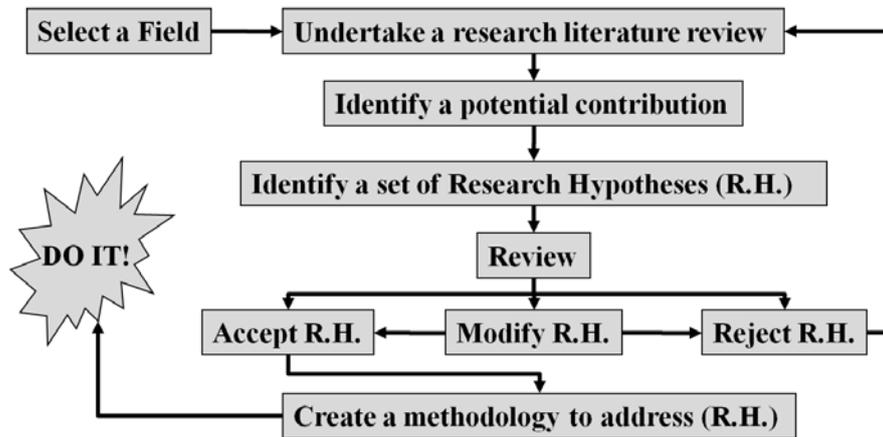
The deductive approach differs markedly (Figure 3). The supervisors who practice this approach consider the creation of a specific 'working proposition' to be their first task (primacy of theory). Typically, this involves some close discussions with the student (who usually has up to five years of marketing education behind them) to establish in more detail what their interest is. The assumption is that they have entered the Ph.D. programme as a result of some specific interest. These preliminary discussions may involve reading books and research texts, which will establish the structure of the field of interest and allow the 'working proposition', a preliminary but specific statement of research intent, to be developed[3].

Figure 3: Deductive pattern of supervision

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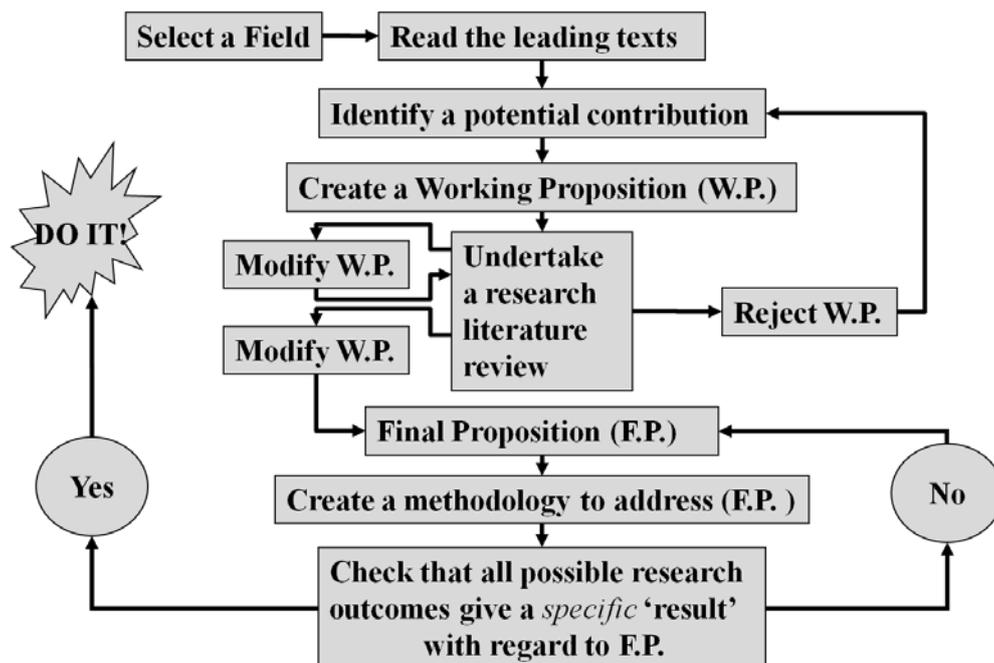
[3] It should be noted that this type of initial 'pastoral' direction can also occur with an inductive supervisor, but the discussions are generally not as tightly focused on creating an initial working proposition, as this is not a requirement of the inductive supervisory paradigm.

Only when this working proposition is in being is the student sent to the research literature in earnest. However, the purpose of this reading, and the purpose of the resulting literature review is very different from its inductive equivalent. The objective is not to create a new proposition, but to test and refine by secondary research one that is already in being. The reading therefore tends to be narrower, deeper and more structured. The expectation is that the working proposition will survive, but that it will be modified in light of discoveries within the literature – usually several times. Sometimes a discovery within the literature leads to its outright rejection, but this is not common. The process of iterative modification via research literature review leads to a final research proposition. The outcome of this process tends to be a 'tighter' proposition than its inductive equivalent, which does tend to make any process of final approval, by the supervisor or by more formal means, a less challenging mid-thesis hurdle.

Outcomes and implications

When one looks at these two models it is fairly clear why having a supervisor from each school of thought on a supervisory team is a potential source of trouble. Luckily this is fairly rare for two reasons: Firstly supervisors generally tend to avoid people that they disagree with - even if they don't know why they disagree, and secondly either one of the two approaches tends to be dominant in specific fields of marketing research. The more 'Arts orientated topics, students and supervisors tend to form 'inductive' communities, while the more quantitative and scientific supervisors and students tend to form 'deductive' communities.

As an individual who has a hard science background, my personal preference and practice runs along deductive lines. Previously, I also believed that this was the 'right' approach, and that my colleagues who used inductive supervisory systems were 'wrong'. With experience has come a certain mellowness, and perhaps wisdom with it. While I would never depart from my own deductive practice, my position is now that it is a matter of 'horses for courses'. Both approaches have their strengths and weaknesses. The deductive approach does seem to have a higher level of efficiency. Students hit the ground running and do not waste time and emotion on a broad trawl through literature that may not contribute significantly to their theoretical development. The earlier 'hard' inputs from the supervisor also increase the chance of significant published research before or shortly after the thesis is submitted, which in these days of research performance measurement is a significant consideration. Deductive literature reviews also have a stronger narrative structure and the final propositions do tend to be much tighter (hence the use of the terms 'proposition' in the deductive model, and 'hypothesis' in the inductive model). This also tends to make the mid-thesis review that often occurs when the research propositions are finalised a less risky and traumatic process.

This tighter theoretical focus also means that the student and the supervisor following a deductive route are often in a position to more fully explore all the potential research outcomes before the field work is conducted, and to assess the implications of these potential outcomes on the final position and contribution of the thesis. The broader hypotheses that are the typical outcome of an inductive literature review do tend to make this process much more

difficult, and as a result this approach does tend to produce a higher level of unpleasant surprises in the later stages of the thesis' preparation. For this reason, the process of outcome review is only included in the deductive model in Figure 3.

The deductive approach does, however, have its problems. The supervisor is clearly in a much more powerful position in the earlier stages of the thesis, and the supervisor's touch must be light if they are to advise rather than dictate to the candidate. There are temptations, which are sometimes succumbed to, that may cause faculty to direct theses towards ends that are more in the interests of the supervisor than the supervised. The very narrowness of the literature review means that the candidate may never be exposed to research and ideas within the broader research literature that may cause them to modify their thinking or theoretical direction in this important formative stage of their career. Particularly strong willed or free thinking candidates can also find the deductive supervisor to be annoyingly restrictive.

Conclusions

We do appear to be a house divided with regard to this very basic aspect of our supervisory practice. Within any particular department, each approach will have its adherents, who are unlikely to significantly change their position. Nevertheless, there is no real reason why this division should lead to hostility. Each approach has its strengths and weaknesses, which in turn indicates that neither has a 'general' superiority over the other. Those who have responsibility for administering Ph.D. thesis research would therefore do very well to carefully consider which of these two approaches, and therefore which particular type of supervisors, would be best suited to a particular candidate and a particular field of research interest before they assign supervisors to them.

References

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