

## CHAPTER 5

### THE THESIS STRUCTURE: AN OVERVIEW

**This chapter will develop the argument that argumentative inquiry can be used to design a research report (thesis).** Use will be made of the classic argument, that ‘Socrates is Mortal’ as a running example. This well-known syllogism (comprising two premises and a conclusion) has been selected because it will draw out some of the connections between a simple logical argument and a large social research report.

*All men are mortal,  
Socrates is a man,  
Therefore, Socrates is mortal.*

The theoretical reasoning for the attributes that drive the design of an argumentative inquiry can be found in earlier chapters. The purpose of this chapter is to make a few suggestions about how a design might be operationalised into a thesis or report. Consequently, it will be necessary to ‘invent’ some translations. One again, the aim is to start a debate not to lay down rules. The design used here sets argument within evidence structured by using contemporary systems thinking [e.g. Churchman, 1972; and Checkland, 2001]. There will be more discussion on contemporary systems thinking in the next chapter.

#### UP-FRONT

The argument (conclusion) is presented up-front with the research questions it raises. So, using the ‘Socrates’ example, the argument statement is:

***That*** Socrates is mortal

However, note that the counter is implied in this argument. For a modern research report it may be safer to write this argument as:

***That*** Socrates is mortal ***and not*** immortal

The basic argument raises several questions such as, why any one cares, who was Socrates, and how is mortality being defined? These questions may be subdivided between those that will require further empirical research and those that can be supported from reasoning and existing literature. While it is accepted that the researcher’s learning journey did not start with this conclusion, stating the conclusion as an argument up-front helps the audience evaluate the evidence that will be presented later in the report. It also makes explicit the bias or concern of the researcher or at least their bias when the research report was drafted. The report is the evidence in support of the researcher’s argument by the end of their research.

The up-front approach can be contrasted with the ‘emergent’ approach, which presents a research report as the diary of the journey of discovery for the researcher, who discovers things from the literature, and from his or her empirics. The ‘emergent’ approach is much more researcher-centric than the reader-centric approach, more relativistic and less about knowledge

having to be justified to a universal cynical audience. With this approach, the conclusion, implication and recommendations at the end of the report (thesis) may not be fully supported by all the contents of the report, especially if the researcher discovers something unexpected and insightful towards the end of the research. The story telling discovery style of research report is not common in formal community based research.

As mentioned, it is hoped that the argument will (at least in its final draft) be surprising, falsifiable and offer an alternative. Surprising, in this context, means containing some innovative element, that is, providing some new insight. The argument 'Socrates is mortal' would fail on this very important criterion. That 'Socrates is **not** mortal' is far more interesting. If the argument is not insightful, then hopefully the evidence brought to support the argument will be. Moreover, the argument needs to be falsifiable, that is, is there likely to be any empirical evidence to disprove your argument? In this case, it is unlikely that Socrates can be found alive agonising over the quality of 1st year undergraduate essays.

Finally, this example argument is not very rich because it does not offer an alternative. The argument stated here is of the form:

That Socrates is mortal

With the alternative: **and not** immortal

However, Missimer [1995] suggests richer argument occurs, and more knowledge is generated if a clear alternative argument is set up. For example:

That Socrates' mortality is greater than Protagoras.

There would then need to be some explanation why these two particular philosophers were chosen, and why they provide an interesting foil to each other.

However I will stick with the famous syllogism for illustration purposes in this chapter. After stating the argument and related research questions, the first chapter continues to address the issue of why the argument is important, or the motivation. Why should anyone bother to do any research into this argument? Traditionally, motivation has been divided into two parts. The first relates to the researcher's personal motivation. Why is the inquirer bothering to mount this research? This often includes some personal details to allow the audience to appreciate the basis of the researcher's insight. For example, if a physicist or a philosopher were writing this report, you would expect a very different set of supporting evidence, than when compared to a social systems designer's approach. The second aspect of motivation relates to the reader; why should the reader be interested in the argument topic that 'Socrates is mortal'? Typically, this will involve citing the numerous other authors and researchers who claim that this issue needs to be studied.

A further part of the argumentative inquiry design is to identify clearly the intended readership or audience. Who is the researcher writing their conclusion to; who needs to be convinced of the conclusion? What may be an insightful argument, or piece of evidence, for one group of people might appear obvious to another. If an insight comes from one stakeholder group, and is then used in your thesis, it assumes the thesis is not targeted at them as the audience. Many insights are of the sort where an idea or metaphor from one domain is used in another. It may be innovative to the importing group, but is merely an interesting application to the source

group. An example is Darwin's 'Origins of the Species' where he used the capitalist ideology of competitive free trade to explain the selection process in species, much to Marx's amusement. So, for example, the main audience for the argument that 'Socrates is mortal' is researchers in social systems. The secondary audience, as it is unlikely they will see this chapter, is designers who are thinking about ways to collect and report evidence in support of a system design. It is not expected to be of any use to physicists or philosophers.

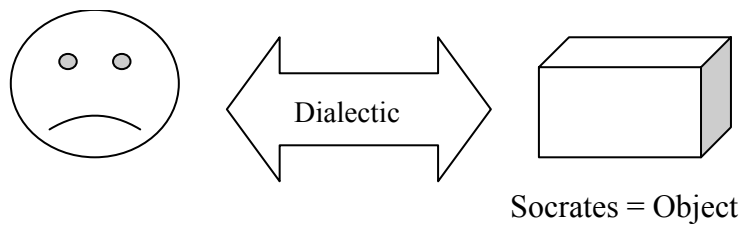
After explaining the importance of justifying the argument, some time has to be spent on providing working definitions for any key words in the argument. This is done to establish some common ground (or understanding) and to stop counter arguments that turn out to be semantic. Defining terms is of particular importance in social research, as specific social groups can socially construct the same word very differently. The word 'critical' is an example. It has several different constructs, some based on engineering, some on English literature and others on emancipation. In this example, 'Socrates' might be briefly defined as a man who lived in ancient Greece about 500 years before Christ, famed for his philosophical approach as captured in Plato's surviving manuscripts. 'Mortal' might be defined to mean, 'capable of death', or the extinguishment of life, as understood to be true of all living things.

### THE EVIDENCE

In a report, or thesis, the argument needs to be fully justified and located relative to counter and alternative arguments. The argument provides the opportunity for insight; the supporting evidence provides the justification. A thesis is required to be thorough and precise with the quality and quantity of the evidence provided, which may be in the form of reasoning or empirics. Empirics is defined as, that which is seen 'through the senses of experts' so it includes measurement and experience. Using the courtroom metaphor, the literature acts like expert witnesses whose experiences need to be given a voice so as to provide support for the argument. This approach will be elaborated upon in later chapters, but briefly, previous researchers and authors can be cited as supporting evidence based either on their opinion, if it can be shown to be relevant, or based on their research findings. It is important that the basis of their expertise is established before their opinion or research findings are presented. This basis tends to be convincing if it is premised on careful prior research, or a particular experience, rather than a job title.

The guarantor of insight resulting from an argumentative inquiry design is 'competition'. An external dialectic, or tension, needs to be set up between two alternative arguments. In this case, the dialectic is based on whether Socrates is, or is not, mortal. It is hoped that much will be learnt from the exchange between two humans taking sides and challenging each other in a reasonable way. However, the argument 'Socrates is mortal' also contains what might be called an internal dialectic. In this case, it is between the word 'Socrates' as the object of the argument, and 'mortality' as the concern being taken on that object. This might be visualised as:

Mortality = Concern



This internal polarisation of the argument is useful for at least two reasons. First, it helps make explicit the tension in an argument, that is, it helps distinguish a statement from an argument. Secondly, it provides a useful way to divide up the evidence provided to support the argument. For example, in the research report there might be a chapter about 'Socrates' and another about 'mortality'. While separated initially for discussion purposes, the two parts will then need to be rejoined say in the next chapter to provide coherent supporting evidence. Exactly how this is done will depend on the researchers style and the available evidence.

So, it can be convenient to divide the thesis chapters into the 'object' and the 'concern'. In this case, it would mean having one chapter on 'Socrates,' another on 'mortality', and a third chapter to conclude that Socrates is mortal. This helps provide the all important argument structure. Using the Socrates example, I have decided on the following structure:

- 1) that Socrates was a living human being (i.e. discuss Socrates' life)
- 2) that all living beings die (i.e. discuss mortality),

And, therefore, conclude that Socrates must be mortal because he died.

The 'Socrates' chapter should include evidence (reasoning and empirical) that he actually lived, which is constructed from a range of sources, such as ancient manuscripts, the references of others and so on. Moreover, the dates of significant events in his life could also be presented, especially the details of his execution. To open up your thinking about this topic it is important to use a 'critiquing' method. Examples include systems thinking, TOP multiple concerns [Mitroff and Linstone, 1993], and critical social thinking, which will be elaborated in the next chapter. For present purposes, if the researcher were using a systems thinking approach she or he would invoke questions such as, where did Socrates come from, what relationships did he have, and what was his purpose? This questioning approach may utilize, or benefit from, the problem picturing approach, also discussed in the next chapter.

The mortality chapter might start with the biological evidence that all living things, including ancient Greek men, die. It might want to anticipate the counter argument that souls do not die from the more 'spiritual' people in the audience. More pragmatically, is the argument that he is immortal because he was the first theory of knowledge philosopher for whom there is a fairly extensive written record, which suited the needs of the 5<sup>th</sup> Century emergent Muslim scientific community. However, as this is only an illustrative example, we might conclude that Socrates is mortal, provided that the word 'mortal' is defined in the biological sense not a spiritual, or canonical, one. Again, using a 'critique' approach may help open up your thinking on mortality. This time using Linstone's [1999] T.O.P. multiple concerns approach would encourage questions such as, technically (T) what is death, at an organisational (O), or community level, is knowledge lost after the death of one person, and at a personal (P) level, how does the fear of death alter our thinking in life?

Notice, as an aside, that the social inquiry has put language-context onto something intended to be language-independent; the argumentative process has become one of defining words. This, too, is an important difference between the deductive logic inquiry design assumptions, inherent in the syllogism, compared with social research. While the 'Socrates is dead' argument is only being used as an example to demonstrate the attributes of the argument inquiry design, it does underline the need for different inquiry design when language-construction is present. The thought of solving the problem by locking down the meaning of words may be a mistake, but enough of that here.

## IMPLICATIONS or 'SO-WHAT'?

The presentation of the 'Socrates is mortal' argument 'begs the question,' so what? If I accept the argument, how will this new information inform my future actions? This problem does not come up in scientific inquiry, as discovering something like the force of gravity does not allow for discussion on what would be the optimum gravitational force. There are no 'designing society' issues. However, in the world of social research, this is a concern. Arguments need to be pragmatic; the implications of accepting them made explicit. Habermas calls this social action. Argyris calls it 'theory for action'. Put another way, and using the metaphor of a thesis as a design of a human communication system, then means that the justification part is analogous with project justification and the implication chapter is the description of the new system.

Implications following from the "Socrates is mortal" argument are not easy to think of, which highlight it as problematic for a pragmatic argument. Being a bit crass, maybe the implications (recommendations) are to write up the knowledge of great thinkers before they die. Mind you, I think Plato knew that, and Socrates disagreed.

## EXAMPLE THESIS CONTENTS

This section will outline a possible structure for a thesis. Of course it is only a guide. Before you start, first state the overall argument (conclusion). For example: This thesis will explore the argument that: "**Socrates is Mortal.**"

CH. 1 INTRODUCTION: This chapter will use the literature to argue that **the research is important**. It will introduce:

- The argument and research questions.
- Definitions of Socrates and mortality (brief).
- Why the argument is important and for whom.
- Summary of the evidence that will be presented, maybe in the form of a map.

## CH 2. SOCRATES THE MAN

This chapter will use the existing literature to argue that Socrates was a man.

- Use the literature (past research and reasoning) to scope, further define, show use of, and compare and contrast the concept of 'Socrates the man'. Put another way, it will present the evidence "*Topics*" sub-arguments, hypothesis, issues etcetera relevant to the manhood issues. Details on how to structure this section will be presented in later chapters.
- End with the shortcoming of your evidence on this issue, including circumspection, and any outstanding empirical research questions.

## CH. 3. MORTALITY

This chapter will use the literature to argue that men are mortal.

- Again, use the literature to will scope, define, show use of, and compare and contrast but this time on the concept of 'mortality'. In other words, it will present the evidence "Topics" sub-arguments, hypothesis, issues etcetera relevant to the mortality issues.
- End with the shortcoming of your evidence on this issue, including circumspection, and any outstanding empirical research questions.

#### CH 4. SOCRATES MORTALITY

This chapter will use the literature to argue that Socrates was mortal.

- Having fully explored the concepts of manhood and mortality this chapter will use reasoning and the literature to bring together ideas from Ch 2 and Ch 3. In other words, this chapter needs to the make the point that Socrates is Mortal.
- The chapter should end with the shortcoming of your evidence on this issue, including circumspection, and any outstanding empirical research questions.

#### CH. 5 RESEARCH METHODOLOGY

This chapter will use the literature to argue that **the methods** used to collect the supporting evidence are reasonable and considered, so that the overall thesis will make a valid contribution to knowledge. This can be achieved by following a number of steps:

- First, this chapter will need to explain to the audience; how you are defining knowledge, and what contribution to knowledge will this thesis make?
- Second, it will need to justify (by scoping, defining, showing use of, and compare and contrasting) the research methods selected ( interviews, case studies, questionnaires etcetera);
- Third, the empirical questions will need to be restated in an empirical research plan;
- Fourth, it will introduce the interlocutors (case background, expertise of interviewees etcetera); and
- Lastly, it will identify the limitations of the empirics.

#### CH. 6 RESULTS, INTERVIEWS, STATISTICS

This chapter presents empirical evidence to add support to the overall argument that Socrates is mortal. Its content would include:

- Findings stated as 'what' and then evaluated in terms of the support, or otherwise, to the overall argument;
- Quotes, evaluated in terms of the support, or otherwise, to the overall argument;
- Statistics etcetera evaluated in terms of the support, or otherwise, to the overall argument; and

- Limitations etcetera ...

## **CH 7. SUMMATION, LIMITATIONS AND RECOMMENDATIONS**

The final chapter would include:

- A detailed summation of the evidence that supports the overall argument;
- Limitations in the evidence;
- Contribution to knowledge;
- Future research; and
- Recommendations for future action, and/or implications.

## **REFERENCES**

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