The Australia Telescope Compact Array (ATCA) is a
spase radio synthesis array, with 15 baselines compared to 351
for the Very Large Array (VLA) and 40 for the Westerbork
Synthesis Radio Telescope (WSRT). It was envisaged that to
provide good spatial frequency coverage, four separate observations
in different baseline configurations would be required to
adequately image a typical radio source. In practice, such usage
would have precluded the use of the ATCA to survey a large
number of sources. At the time, this raised questions such as:

- Was a survey of a large number of sources in a small number of
  observing sessions achievable?
- Would a “CUTS”-type observation with the ATCA be successful
  for compact sources?
- Given the small number of baselines, could the resulting
  images be deconvolved and used for quantitative analysis?

This thesis presents the results of an observing programme which
used preliminary Magellanic Cloud survey images from the MOST
to select sources to be studied with the then new ATCA. To test
the viability of the “CUTS” technique for the ATCA, a single
12-hour observation at 4750 MHz was made in May 1990,
targeting seven sources and two calibrators in the Small Magellanic
Cloud (SMC) over 1-hour cycles. The reduced data produced
images of satisfactory quality to enable quantitative analysis
including the determination of peak and integrated flux densities
and the angular extent of the source. The observing programme
was therefore extended to include further sources in both Clouds
over a 12 month period. At that time only 5 ATCA antennas were
operational, giving just 10 baselines. The observing techniques
outlined here were extremely fruitful, and are now the basis for
many continuum observations with the ATCA, made with the full
set of 6 antennas and 15 baselines.

The properties of 61 compact radio sources in the Clouds are
presented in this thesis, including flux densities at frequencies
from 408 MHz to 8.6 GHz, radio spectral indices, and the
presence of coincident X-ray emission and likely classification
of the emitting object. These studies have had significant
scientific implications, including the selection of source
candidates for other survey work and detailed studies of individual
objects, two of which are the subjects of detailed chapters of

* Move 3c, titled Thesis Outline, is found in full in 1.4 of this thesis chapter.

Source: Amy 2000: 1–2.
Table 6.1 Typical moves in thesis Introductions

**Move 1** Establishing a research territory
a. by showing that the general research area is important, central, interesting, problematic, or relevant in some way (optional)
b. by providing background information about the topic (optional)
c. by introducing and reviewing items of previous research in the area (obligatory)
d. by defining terms (optional)

**Move 2** Establishing a niche
a. by indicating a gap in the previous research, raising a question about it, or extending previous knowledge in some way (obligatory)
b. by identifying a problem/need (optional)

**Move 3** Occupying the niche
a. by outlining purposes/aims, or stating the nature of the present research or research questions/hypotheses (obligatory)
b. by announcing principal findings/stating value of research (optional)
c. by indicating the structure of the thesis and providing mini-synopses (previews) of each subsequent chapter (obligatory)
d. by outlining the theoretical position (optional)
e. by describing the methods used in the study (optional)

Source: based on Swales and Feak 1994: 175 and Bunton 2002: 67

---

**Box 6.3 Extract from Introduction of a PhD thesis in history**

Chapter 1
Introduction and thesis
Overview
Introduction

In this introductory chapter the background to the present research study will be provided along with an outline of the principal theoretical propositions. The chapter will also set out the research problem and the associated research questions that the thesis seeks to address. The justification for the research and a statement of the contribution the thesis makes to the field of sports studies follows. Finally, a brief overview of research methodology will be included along with an outline and diagrammatic representation of the structure of this thesis.

**Advance organizer**

Occupying the niche

This thesis is an investigation of the sporting experiences of women from culturally and linguistically diverse backgrounds in Australia. Women from diverse cultural and linguistic backgrounds are a sub-population that has been identified as the ‘other’ in previous research...
play in promulgating male hegemony; the ensuing power relations that are created, maintained and reinforced by these institutions; and the opportunities that women have to contest and resist a gendered construction of society. Initial feminist treatises proposed grand theories, which were applied to all women, however these theoretical assumptions have now shifted and recent works recognise that ‘women’ are not a homogenous group. In particular, feminists have delved into issues surrounding the marginalisation of women who do not fit into Eurocentric, middle-class, Western ‘White’ theorisation within poststructural theory (Prakash, 1994; Spivak, 1988). Poststructural feminists have further suggested that all studies of women need to acknowledge non-white, ethnic minority women and rethink how social identities and forms of knowledge can encompass the ‘other’ (hooks, 1989).

Establishing a niche in feminist literature
Research on questions of racial and cultural differences in sports appears to have been slow to respond to poststructural feminist imperatives, with research primarily located within androcentric paradigms (Thomsson, 1998).

Source: Taylor 2000: 1–2

**Conclusion**

The CARS framework has been found to be a useful way of assisting thesis writers with developing a structure for their Introduction that enables them to clearly indicate to the reader what the significance of their thesis is. It should not however be seen as rigid and inflexible: it is a tool for understanding how writers within different disciplines attempt to persuade their readers of the validity of their arguments for the research space they have created.

Writers of completed theses will often report that the Introduction was the last chapter that they wrote and many experienced writers of journal articles report a similar phenomenon. For some, the introductory section is one of the hardest to write. While it can be argued that one only knows where one is going once one has arrived and that is why the Introduction can only be written at the end of the journey, it is important to at least draft the Introduction – and the research proposal will, to a degree, be that draft – so that it can be redrafted as the thesis evolves until finally the overall meaning of the thesis emerges. As Levine (2002) puts it, Chapter 1 – the Introduction – needs to be ‘rewritten’ with the insights gained from having drafted the complete thesis. The Introduction may also ‘tidy up’ the somewhat messy, circular process of the research and make it appear more linear and logical.

A final point concerns the article-compilation thesis – a collection of published papers, prefaced by an Introduction and a concluding chapter – which