

THE PhD SUPERVISORY RELATIONSHIP AND PROCESS

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Abstract

The PhD supervisory relationship is an intricate, often private, long-term relationship for a student and supervisor. This study explores the PhD supervisory process examining the patterns evident in the relationships students develop with their supervisors and the ways that they work together. It is hoped that the findings from this study will contribute to the already extensive literature on PhD supervision and our understanding of that supervision.

The methodology chosen for the study was a longitudinal exploratory and descriptive survey. Both quantitative, but predominantly qualitative methods of data collection were employed. Quantitative data were collected using Moses' (1981a) Role Perception Rating Scale. Qualitative data were collected via in-depth, semi-structured face-to-face interviews. The participants were 21 PhD student-supervisor matched-pairs or dyads from five faculties in a large Australian university. Interviews for PhD students and supervisors were conducted separately. Most students and supervisors each had three interviews over a three-year period from late 1995 to late 1998.

An educational evaluation framework devised by Stake (1967) was the model for the analysis of interview data and the presentation of the findings of the study. Utilising this framework involved identifying antecedent conditions to the PhD supervisory process, the transactions that occurred between student and supervisor during the process, and the outcomes of the process. The outcomes were then related to the antecedent conditions and transactions.

PhD students and their supervisors formed a variety of relationships ranging from personal friendships to professional relationships with poor interpersonal working functions. Power was an issue for some students in their supervisory relationships. A number of personal friendships were successful and endured throughout the data collection period for this longitudinal study. A variety of supervisory styles were also evident ranging from close, reasonably directive and interactive to not close, non-directive and not interactive. Although supervisors claimed that they changed their supervisory style for individual students at various stages of the research process and for

different students, the evidence from student reports was otherwise. Several students felt that their supervisors gave them too much autonomy or independence; none felt that they had too little freedom.

The supervisory relationship, supervisory style, power issues and student autonomy were interrelated and linked to outcomes. Positive supervisory relationships without power issues, and a close interactive supervisory style with students satisfied with the level of autonomy they had, were associated with satisfactory thesis progress and student satisfaction with supervision. The converse of this was also found. Poor supervisory relationships often had power issues for students, remote supervision and students feeling that they were given too much freedom by their supervisors. These students wanted more structure to supervision and more detailed guidance and feedback from their supervisors. These relationships were associated with student withdrawal from candidature and dissatisfaction with supervision. Different or opposing responses by students and supervisors to items on Moses' (1981a) Role Perception Rating Scale was a feature for students who discontinued their PhD study or were dissatisfied with their supervision.

Also found to be associated with slower progress was student intermission and a temporary change in supervisory arrangements. Most students who experienced a temporary change of supervisor while their supervisor was on leave experienced problems and delays in relation to their thesis work. Steps to tackle this transition more successfully and productively are suggested.

Although many students and supervisors were extremely happy with their supervision experiences, adequate time for supervision was a concern to both students and supervisors. In addition, "quality" time free from interruptions, was a concern for some students.

Declaration

To the best of my knowledge, this thesis contains no material previously published or written by another person, except where due reference is made in the text.

This thesis contains no material that has been accepted for the award of any other degree in any university or other institution.

Signed:

A solid black rectangular box used to redact the signature of the author.

Date:

28 / 01 / 02

Ethical approval for this research was granted by the Standing Committee on Ethics in Research on Humans from Monash University on 14 September 1995, Project E7.56/95.

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Chapter 1 - Introduction

1.1 Background to the Study

During the process of a student studying for a Doctor of Philosophy (PhD) degree, the main link with the department, faculty and university is via a supervisor, and, in some instances supervisors or even a supervisory committee. Obtaining a PhD is likely to take three to four years for the full-time student and approximately twice as long for part-time students. During this period of time a relationship develops between student and supervisor. G. Phillips (1979) described this relationship as "a comradeship of extraordinary intensity" and "intimate in every sense of the word" (p. 339). He outlined a painful and awkward period at the start of building the relationship, as mutual styles were learnt and mutual goals defined. He also suggested the intensity of contact throughout the supervisory relationship "is sufficiently great that it blocks out attractive blandishments and sustains the student's attention over a period of years" (p. 345).

Many authors (eg, Friedman, 1987; Goulden, 1991; Heinrich, 1991; Hockey, 1991; Lowenberg, 1969; Organisation for Economic Co-operation and Development [OECD], 1987; G. Phillips, 1979) have suggested that the relationship supervisors develop with their students can do much to increase student satisfaction with the PhD process and produce quality theses. Others (eg, Lowenberg, 1969; Lozoff, 1976) believe a good supervisory relationship prevents demoralisation and emotional disturbances in students. Preventing slow progress and the large percentage of "drop outs" has also been linked with a good supervisory relationship (eg, Cheatham, Edwards & Erikson, 1982; Cullen, Pearson, Saha & Spear, 1994; Friedman, 1987; Goulden, 1991; Hamilton, 1993; Jacks, Chubin, Porter & Connolly, 1983; Kyvik & Smeby, 1994; OECD, 1987; Powles, 1988b; Rudd, 1985; Winfield, 1987). These problems are causes of concern to governments, universities and PhD students.

Welsh (1978) described the aspects of the student-supervisor relationship as professional, personal and organisational. Wright (1986) also highlighted the personal

as well as the intellectual aspects of supervision. Brown and Atkins (1988) saw interpersonal relationships as a major factor in the supervision process. Shannon (1995) described this interpersonal relationship as intangible, and defying how-to-do-it kits.

Central to this relationship between supervisor and PhD student is the style of supervision employed by the supervisor. How are autonomy and power negotiated and managed over time within the supervisory relationship? The fact that tensions, ambiguities and role conflict exist was pointed out by many (eg, Glasner & Mugford, 1978; Lozoff, 1976; Madsen, 1983; McAleese & Welsh, 1983; Taylor, 1976; Walford, 1981; Wright & Lodwick, 1989) along with the need to renegotiate the relationship over time (Brown & Atkins, 1988; Taylor, 1976; Walford, 1981). Katz and Harnett (1976), in their concluding chapter, highlighted the indeterminate status of the graduate student and the conflict between desire for intellectual freedom and dependence on powerful parent-like figures.

1.2 Justification for the Study

In 1969 Lowenberg commented that "No one has yet focused on the emotional conditions of graduate studies" (p. 613). This has been said in different ways by others (eg, Friedman, 1987; Glasner & Mugford, 1978; G. Phillips, 1979) with little being done about it. This is despite the paradigm shift of social research of the 1970s to more qualitative methods making the investigation of personal and interpersonal factors more acceptable (Elton & Pope, 1989).

"While there is a literature on PhD supervision, little research has been undertaken upon the intricacies of the actual relationship between the PhD student and supervisor" (Hockey, 1996b, p. 481). Accountability procedures in universities tend to concentrate on general indicators or outcomes, eg, completion times and rates. Supervision has some influence on these outcomes, but not much is available about the supervisory relationship and process, or the factors that determine its effectiveness (Donald, Saroyan & Denison, 1995). Supervisory style, autonomy and power recur throughout the research supervision literature as problem areas in supervisory relationships. The negotiation and management of supervisory style, autonomy and power within the supervisory relationship directly affects the emotional conditions of graduate study. The

investigation of these issues to date has generally been incidental. Thus supervisory style, autonomy and power require planned, specific and in-depth exploration.

Harrow and Loewenthal (1992) considered the concept of power in their study of research students' perspectives on roles, interventions and power because "the question of the powerful role which academic supervisors play in their tutees' lives does not seem to be addressed in the supervision literature" (p. 56). In this study students ranked expert power (knowledge and ability) first and referent power (liked and respected by students) second. Legitimate power (authority as institution's representative) and reward power (ability to give good and bad marks) were not highly regarded. Whilst this study provided useful information regarding students' preferred source of supervisors' power, it gave no insight into the negotiation and management of power within the supervisory relationship.

Other authors support the need for an in-depth exploration of power and autonomy within the supervisory relationship. In 1976, Katz and Harnett suggested more local studies need to be undertaken "to raise the consciousness of those faculty and students who are disposed to value intellectual and emotional autonomy and do something about it" (p. 267). G. Phillips (1979) said "As with any closely relating pair, the character of the professor-student dyad is defined by the public and private needs of each party, with the needs of the professor having ascendancy in case of conflict. In public, both must abide by prevailing social requirements. In private, they are free to negotiate a way of working together that is beneficial for both" (p. 342). Nothing has been written about how such negotiations take place, whether they are overt or covert, conscious or unconscious, nor the results of such negotiations and levels of satisfaction by those involved. Cox (1988) pointed out there seems to be "no in-depth studies of these critical relationships on the borders between autonomy and dependency" (p. 21). As recently as 1994 Cullen et al. found in their study on supervision "issues of power and control in facilitation and educational relationships, a topic which is often never raised in such settings" (p. 97) was indicated by some students and post doctoral fellows as needing to be examined.

An in-depth picture of the patterns that are evident in the ways PhD students and supervisors work together over time would increase our current understanding of PhD

supervision. This in-depth picture would include the relationships that students and supervisors develop and maintain, the supervisor's supervisory style, and how power and autonomy and power are negotiated and managed over time. Both supervisors and PhD students would be provided with information that could make the relationship more productive and rewarding. Emotional problems, slow progress and dropping out could all be reduced. As observed by Lowenberg (1969) "We must be concerned with the high degree of demoralization and attrition among many of our most competent graduate students" (p. 614). Providing appropriate and well timed support will do much to nurture autonomy as the student matures intellectually (Eggleston & Delamont, 1983).

1.3 The Present Study

1.3.1 Purpose

This is a thesis that focuses mainly on the "human" dimension of PhD supervision. It explores the personal, interpersonal and emotional dimensions of the PhD supervisory relationship over time, with a particular emphasis on supervisory style and how autonomy and power are negotiated and managed within the relationship.

1.3.2 The Research Question

The main research question examined by this study is:

What patterns are evident in the relationships PhD students and supervisors develop and the ways they work together?

1.3.2.1 Subsidiary Questions

1. What types of supervisory relationships are developed and maintained between PhD students and their supervisors?
2. How are supervisory style, autonomy and power negotiated and managed between PhD students and their main supervisors during the PhD supervisory process?
3. Are supervisory relationships, supervisory style, autonomy and power interrelated, and do they effect the outcomes of the supervisory process?
4. Are there features that are characteristic of particular student and/or supervisor groups, eg, part-time students, women, international students, older students, different disciplines, inexperienced supervisors?

1.3.3 Methodology and Design

The area of interest for this research required a design that would allow the nature of the PhD supervisory relationship to be explored over time from the perspective of both supervisor and student. Because of the personal and sensitive nature of the supervisory relationship, ethical concerns were a priority in the selection of an appropriate research design. Thus case study and pure qualitative research designs, eg, phenomenology ethnography, were not considered appropriate as they may have resulted in the identification of participants. A survey design was finally chosen. However data were collected predominantly via face-to-face, in-depth, semi-structured interviews rather than via questionnaires. This provided a more qualitative focus to the study.

Interviews were conducted with 21 PhD students and their main supervisors over a three-year time period from November 1995 to October 1998. Interviews with students and supervisors were conducted individually, so the research would not interfere with the supervisory relationship and process. Each student and supervisor was interviewed three times, with yearly intervals between interviews. Because this approach resulted in voluminous amounts of verbal data, much of the presentations of findings are through the words of the participants.

1.4 Outline of the Thesis

An educational evaluation model proposed by Stake (1967) has shaped the organisation and presentation of this study. Stake criticised traditional formal evaluation methods in education for not indicating antecedents (prior conditions) and transactions and coupling these to outcomes. This will be outlined in more detail in Chapter 3, Methodology.

Chapter 2, Literature Review examines the literature relevant to this study that was available prior to the data collection period for the study. Literature from 1995 onwards is presented and discussed where relevant in relation to the findings of the study in the result chapters. Literature on the supervisory relationship and process, supervisory style, power and autonomy is reviewed. Chapter 3, Methodology presents and explains the methods and procedures employed in the gathering of data. As previously mentioned, ethical issues were a primary concern. The findings of the research are located in three

result chapters 4, 5 and 6. Chapter 4, Antecedent Conditions presents the prior conditions that supervisors and students brought to the supervisory relationship and process. Chapter 5, Supervisory Transactions presents the main transactions that occurred between students and supervisors. A large number of transactions necessitated a long chapter; thus the chapter is divided into seven interrelated sections. Chapter 6 presents the outcomes of the supervisory relationship and process. A summary and discussion of the findings are presented in Chapter 7. Conclusions from the findings and recommendations are also included in this final chapter.

1.5 Chapter Summary

Chapter 1 has introduced the study issues. In particular it has provided the background and rationale for the study and its importance. A description of the study has been provided, including the questions asked and a brief outline of the manner of addressing the questions. More detail regarding this is provided in Chapter 3, Methodology. An outline of the structure of the thesis has also been provided.

Chapter 2 - Literature Review

2.1 Introduction

Chapter 1, Introduction provided the background and rationale for the current study; it also articulated the questions to be addressed. This chapter presents a review of relevant literature that is predominantly prior to 1995, when the data collection period for this study commenced. Literature on supervisory style, autonomy and power was reviewed. The review is located within the context of the personal and interpersonal aspects of the relationship between higher degree research students and their supervisors, and considers emotion as a dimension of the supervisory relationship. Relevant literature from 1995 onwards will mostly be presented in relation to the findings of this study in Chapters 4, 5 and 6.

2.2 Structural Aspects of Research Degree Supervision

Over the years many attempts have been made to improve graduate education (see eg, Rudd, 1975, 1985; Swinnerton-Dyer, 1982; Winfield, 1987). These attempts have almost exclusively concentrated on the structural features of graduate education. Examples include the development of graduate schools, introduction of codes of practice, joint supervision or supervisory committees rather than single supervisor arrangements, training and departmental support for supervisors, increased coursework and seminars for graduate students, and progress reports for research degree students.

Holloway (1995) said that the case for single supervision was not strong. She argued for two supervisors saying that one could have expertise in the research method, the other specialist knowledge, that is, complementary roles. This provided continuity of supervision for the student when one supervisor was ill or absent, and support for supervisors. She admitted students could become confused if two supervisors gave conflicting advice, but said that this could be overcome by frequent contact between supervisors and occasional joint supervisory meetings. After their 1994 study, Cullen et al. recommended the establishment of supervisory panels or committees to give students

access to wider skills and expertise. They suggested that panels also help alleviate problems that arise through personal interactions and changes of personnel.

Whilst acknowledging the importance of these structural improvements, they alone cannot improve the life of the research degree student. As stated by Lowenberg (1969) in relation to graduate school format: "Before any changes in structure will be effective, instead of merely being reinstitutionalizations of domination, a consciousness of the emotional dimensions of the academic teacher-student relationship must be achieved" (p. 621). Leder (1995) acknowledged that there were rights and responsibilities of research students and supervisors beyond those commonly listed in university handbooks, and that a "successful transition from conception to birth of a thesis requires a carefully balanced partnership between research student and supervisor" (p.6). Elton and Pope (1989) saw the concept of collegiality, an academic peer relationship between supervisor and student, as providing "a constructive interplay between organisational and personal as well as inter-personal factors" (p. 267).

2.3 The Relationship between Higher Degree Research Students and their Supervisors

Much has been written about research supervision, particularly over the last two to three decades, mostly about slow progress, attrition and student dissatisfaction with supervision. That supervision is important remains largely undisputed. In 1972 Marsh surveyed 1302 postgraduate students in the social sciences in the United Kingdom. A questionnaire was sent to students who were due to end their award. Therefore students who had discontinued their studies earlier were not represented. There was an 82.5 percent response rate. Respondents ranked supervision as number one in importance out of a number of interpersonal and facility variables. Interpersonal variables included seminars, contact with postgraduates in the same field and contact with people outside in their own field. Facility variables included library stocks, computer time and cash and materials for research. Marsh concluded "there was strong agreement among all students that supervision by a specialist in one's own field was the most important feature of a postgraduate education" and that this "judgement holds constant between most of the disciplines and universities" (pp. 39-41). Heiss (1970), after conducting a large study in the United States, also concluded "the quality and character of the

relationship between the doctoral student and his major professor is unequivocally the most sensitive and crucial element in the doctoral experience" (p. 151).

Program directors (departmental persons responsible for graduate education) in a study by Donald et al. (1995) said that the two most important factors in graduate supervision were the supervisor's knowledge of the research field and their availability. There was a growing suspicion that supervision was an under-resourced area in the university. However Manderson (1996) said that the student could expect the supervisor to provide time for supervision. Students can also expect that their supervisors have read written work, and that it has been criticised constructively, when they come for pre-arranged supervisory meetings (Holloway, 1995).

Holdaway, Deblois and Winchester (1995), after surveying 736 supervisors of graduate students in 37 universities in Canada, found support for restricting supervision to active researchers and assigning supervisors with expertise in the student's research area. Some supervisors in this study favoured involving students in the selection of supervisors. Powles (1993) argued that although expertise in one's field of specialisation, and active involvement in research are prerequisites for a supervisor, they did not guarantee good supervisory practice. Salmon (1992) highlighted that personal support was the most the most important dimension of the supervisory relationship. Manderson (1996) pointed out that there is a great distinction between a thorough and general familiarity regarding the substantive topic of the thesis which is necessary, and specific expertise, which is not. He views experience rather than knowledge as the aim of supervision and says the "supervisor's role is to help the student learn how to learn" (p. 410).

Gender representativeness has also been found to effect the student's experience. Tidball (1986) identified a positive relationship between the number of female faculty and the number of female students successfully completing doctoral degrees in the natural sciences. A study by Epp (1994) found that female graduate students recommended that universities employ more female professors to provide more role models.

2.3.1 Personal and Interpersonal aspects of the Supervisory Relationship

A large amount of the literature on supervision is based on learned opinion and reflection as well as research. The lack of empirical research on research supervision has been noted by many (see eg, Brown & Atkins, 1988; Friedman, 1987; Winfield, 1987). The focus of the literature has generally been on university and departmental infrastructure and regulations/guidelines, and the academic/professional aspects of supervision. Despite this, the importance of the interpersonal and personal aspects of the supervisory relationship has been acknowledged in several studies/articles, and appears to be of particular concern to students.

Powles (1988b) stated "obviously, personal as well as intellectual relationships are involved" (p. 32) and highlighted the fact that supervisors' and research students' perceptions about these relationships can differ. This was found to be the case in a study by West, Hore and Beard (1988). After interviewing 26 student-supervisor pairs at Monash University, they found most students were satisfied with their supervision and their personal relationship with supervisors. However, in some instances the perceptions of supervisors and students differed, for example, the supervisor saw the rapport with the student as good, whilst the student said rapport had deteriorated. Powles (1994), after surveying all participants in the Australian Postgraduate Awards (Industry) Scheme, found that supervisors were almost invariably more satisfied with aspects of the supervisory relationship than students.

That the personal and interpersonal aspects of supervision are important to students has been highlighted in several studies. Welsh (1978) conducted an important longitudinal study in the United Kingdom at the University of Aberdeen. She interviewed 64 postgraduate research student-supervisor pairs in arts, social science and science. At the end of first year, she found that students expect professional expertise from supervisors, but that:

expertise alone is not the sole or the most important criterion of good supervision for many students. For them the supervisor must be possessed of certain personal qualities which him readily [*sic*] to show interest in and enthusiasm for his postgraduate's work. He should be able to establish with his student an effective working relationship based on friendship and genuine concern for the all-round welfare of his charge, thus extending his professional role to one that includes helping the student with non-academic matters, ranging from practical help in

making contacts with others in the field to assistance with any personal or social difficulties the student may experience during his period of study. (p. 78)

At the end of first year, about half the students in Welsh's (1978) study expressed concerns, either mild or serious, regarding the quality of their supervision. Professional, personal and organisational causes were cited for the dissatisfaction, and "the main source of dissatisfaction, especially among the seriously dissatisfied, appears to lie in the nature of the relationship between the supervisor and his student" (p. 81). The majority of postgraduate research students, when pressed about the relative importance of personal and professional qualities in the ideal supervisor gave more weight to the supervisors' ability to relate well to their students. This caused Welsh at that time to see "the emergence of 'human' factors as major contributors to effective supervision, with the accompanying decline of emphasis on pedagogical functions" (p. 84).

This position was modified to some extent after following the student-supervisor pairs for a further two years:

Dissatisfaction was most widely expressed in first year; but was most severe in third year. The main causes of dissatisfaction were personal relationships, supervisor expertise, contact and supervisory methods. Students wanted all these things throughout their research period, but in varying quantities at different stages. The emphasis changed from personal relationships in first year to expertise and regular contact which became increasingly important from second year and critical in the third year. (McAleese & Welsh, 1983, p. 18)

Wilson (1980), based on three group sessions for postgraduate students, concluded that students wanted close personal relationships with their supervisors and often had little idea of what their research degree involved. Although few students claimed to have such a relationship "they wanted a close and friendly relationship in which they could talk to their supervisors about their problems" (p. 238). Supervisors, also attending the group sessions, reacted strongly against this desired role. They did not see it as their job to "mother" postgraduate research students. Although this was a small non-representative sample of both students and supervisors, it highlighted the importance of personal aspects of the supervisory relationship for some students and a possible divergence of opinion between some students and supervisors.

Moses (1981a), at the University of Queensland, based a questionnaire on the university guidelines, but also included some possible functions of supervisors not mentioned in

the guidelines. Three out of four veterinary science students saw maintaining close personal contact with the student as an "essential" or "very significant" supervisory function. Assistance to the student in general welfare matters was also seen as "important" by three of the four students. Although these numbers were small, the importance to students of a good personal relationship with their supervisors was emphasised. Moses also regarded it as important for supervisors and students to have a comfortable personal relationship, as well as being able to communicate on a professional level about the research project.

Supervisors, however, seemed to be anxious about personal relationships with research students (Moses, 1984). After conducting a series of seminars/workshops for supervisors, Moses identified the fifth most frequently requested topic for discussion by supervisors as personal relationships with students. Participants at one seminar/workshop expressed uneasiness about personal involvement with students (Moses, 1981b). Heiss (1970) found that some faculty members distrust the student who would like the adviser to also be a friend.

After a longitudinal study at Reading University, which used a questionnaire survey, Wright and Lodwick (1989) found a contrasting picture when compared to the findings of Welsh (1978) and Wilson (1980). Students and supervisors were asked to tick any number of eight functions they felt supervisors should provide. They were also asked to indicate the three most important functions. Develop a personal relationship was ranked eight by both supervisors and students, whilst providing support and encouragement was ranked three by supervisors and four by students. Wright and Lodwick hypothesised "that for the great majority of students for whom the relationship was satisfactory, the academic aspects of supervision would take precedence, while those with a relationship problem would not take this aspect of supervision so much for granted" (p. 47). Also it was unclear at what stage of the longitudinal study the data was obtained. Previous research (Welsh, 1979; Wilson, 1980) had demonstrated personal aspects of the supervisory relationship to be most important during the early stages of the research when the students were finding their feet.

In summing up attitudes towards personal aspects of the supervisory relationship, Moses (1985) concluded that there "are supervisors and there are students who prefer to

have their relationship on a strictly professional basis. ... Naturally, being 'professional' does not mean being unfriendly or unsympathetic; on the contrary. But there is a continuum from strictly professional interaction to very personal interaction" (p. 40). This was similar to the findings of Wright and Lodwick (1989) which suggested a wide variation in attitudes towards developing personal relationships between students and supervisors. The variations were distributed across fields of study, rather than occurring between them (Winfield, 1987).

Despite these varied views about the personal and interpersonal aspects of the supervisory relationship, Harnett (1976) saw a constructive working relationship between supervisors and students as of obvious importance to the conduct of the research. In the major American study presented in "Scholars in the Making" edited by Katz and Harnett (1976), the general pattern of relations between students and faculty was singled out as being of paramount importance.

2.3.2 Importance of the Personal and Interpersonal aspects of the Supervisory Relationship

Many believe a good relationship between research student and supervisor has a positive effect on the quality of the thesis, length of time taken to complete it, attrition and students' views of their postgraduate experience.

Goulden (1991), after reviewing the postgraduate experience with seven supervisor-student pairs, found that the majority of students saw the relationship with their supervisor as "important" or "very important" in determining whether the overall experience was satisfactory or not. In particular, students reporting the most positive and most negative experiences said that the relationship/communication was a significant factor in how they viewed the overall postgraduate experience. This supports previous work by Phillips and Pugh (1987). After extensive research and personal experience in relation to higher degree research supervision, they said that if "personal compatibility is missing everything else to do with being a postgraduate is perceived negatively" (p. 10). After an extensive literature review of PhD studies in the social sciences, Hockey (1991), concluded that the "supervision process is, to state the obvious a relationship. What kind of relationship evolves will heavily influence the outcome of the student's success or failure in gaining a PhD" (p. 327).

Delamont and Eggleston (1983), based on a United Kingdom survey of postgraduate research students in education, said that it "is clear that a student who feels her supervisor is incompetent, uninterested, inefficient or unsympathetic is likely to be an unproductive and unhappy graduate student" (p. 44). They also suggested that the necessary isolation associated with PhD studies would only be a small handicap if the supervisory relationship were good. If it was perceived by the student to be poor, they had nowhere to turn. Eggleston and Delamont (1983) contrasted a constructive and necessary isolation with a negative and destructive isolation. They described the latter as one that "saps self confidence and the will to work" and said this may be "the result of inadequate institutional support at the time it was needed. Effective supervision will then be characterised by optimising support given to the student. Support of the right kind at the appropriate time will prevent destructive isolation. Limiting selectively the levels of support as the student matures intellectually will nurture the student's necessary autonomy allowing constructive isolation to occur" (p.54). Constructive isolation was viewed as necessary for successful research. Moses (1985) and Wright and Lodwick (1989) also highlighted the importance of supervisor guidance, support and friendship, particularly for students who are working alone, that is, in physical isolation from others and intellectual isolation. Wright (1986) suggested that in the arts/humanities and social sciences, where this is often the case, students are often so isolated it affects their personal happiness and perhaps subsequently their personal and intellectual development. She acknowledged that this is difficult to quantify. Hockey (1994) identified both intellectual solitariness and social isolation in his United Kingdom in-depth interview study of 60 first year social science PhD students. He found that both intellectual solitariness and social isolation were less evident when there was good departmental support in terms of intellectual and social activities and facilities, a critical mass of full-time PhD students, and effective, flexible and sensitive supervision.

After interviewing student-supervisor pairs, Friedman (1987) asserted "it is very possible the relationship that a student establishes with the dissertation or thesis advisor affects not only the quality of the dissertation and the length of time it takes to complete it, but also the amount of stress and strain for both parties - student and advisor - during

this period" (p. 9). Friedman also highlighted that the literature tells us virtually nothing about this relationship.

Welsh (1978), although admitting that good personal relations might not contribute to the success of a student's work, believed that negative personal relations were detrimental to a student's progress. McAleese and Welsh (1983), after the longitudinal study at Aberdeen University, contrasted satisfaction with supervision between students who had submitted their theses and those who had not. Thirty-four percent of those who had submitted were unhappy to some degree with their supervision, compared with 64 percent of those who had not yet submitted theses. Whilst these findings focused on supervision generally and therefore incorporated the academic and professional aspects as well as the personal and interpersonal aspects, it can still be argued that the personal and interpersonal aspects contributed to student dissatisfaction and hence their progress. Moses (1985) also attributed long completion times and, in addition high dropout rates, to supervisors' lack of experience and concern as one of several causative factors. Other factors cited were insufficient preparation or ability of students, financial burdens on students, institutional requirements and unfavourable conditions. Rudd (1985), after interviewing postgraduate research students who had slow progress or discontinued their studies, also believed failure to complete or slowness has multiple causation which he saw as relating to qualities of the student, personal and academic/technical difficulties and teaching and supervision.

In the previously cited study by West et al. (1988) at Monash University, students who had slow completion rates reported three main problems. One was supervision, the other two being work-related problems and some experience that required the student to intermit. Students with quick completion rates also cited supervision as one of three reasons, that is, "good supervision, which kept them going particularly through the 'mid-thesis blues'" (p. 59). The other two reasons were that the scholarship or candidature time ran out leading to pressure to complete and an offer of employment that was conditional on completion. Wright and Lodwick (1989), after the longitudinal study at Reading University, concluded that "closer contact and involvement between supervisor and student speeds up the research process" (p. 34). They also tentatively concluded "that the need for more involvement of supervisors and other academic staff is greater for non-science than for science students" (p. 37).

Jacks et al. (1983) after telephone interview of a relatively small sample (25) of doctoral students, who had discontinued their studies, found that a poor working relationship between supervisor and student was one of the main reasons for discontinuation. Moses (1985) also acknowledged that pressure from the supervisor at the wrong time "can lead to a breakdown in the student-supervisor relationship and may lead to the student giving up" (p. 22). Elton and Pope (1989) argued for matching student and supervisor for personal as well as academic/research topic compatibility. They did this and saw it as a reason they rarely had students dropping out.

It therefore appears that the quality of the research student-supervisor relationship is crucial. It is one of several factors that will effect the quality of the thesis, the time it takes students to complete it, and even whether they give up or persevere in times of difficulty. Bowen and Rudenstine (1992) said that it was difficult to think of an academic responsibility more important than thesis advising, and suggested that supervisors should be evaluated regarding their performance as supervisors. Others (Aspland, Edwards, O'Leary & Ryan, 1999; Mullins & Hejka, 1994; Powles, 1988a; Zuber-Skerritt, 1992) have advocated the implementation of strategies for the ongoing review and evaluation of supervision. Yeatman (1995) suggested the use of graduate student logs to make supervision relationships accountable.

2.3.3 Emotion as a Dimension of the Supervisory Relationship

Many authors highlighted that the supervisory relationship has an emotional dimension. Lowenberg (1969) and Phillips and Pugh (1987) purported that learning is more than an intellectual process, it is an emotional experience as well. Regarding graduate education format, Lowenberg stated that "before any changes in structure will be effective, instead of merely being reinstitutionalizations of domination, a consciousness of the emotional dimension of the academic teacher-student relationship must be achieved" (p. 621). He therefore argued for a focus on the emotional as well as academic and technical aspects of research degree studies and suggested "no one has yet focused on the emotional conditions of graduate studies" (p. 613). Katz and Harnett (1976) have done so in their large American study and they also described how strongly the intellectual and emotional aspects of graduate study interweave. Further information about this study will be presented later in the literature review. Moses (1988), after reviewing Australian

and European research studies and policy debates, and conducting a 1986 survey of all higher degree students in the five engineering departments at the University of Queensland, highlighted that most students want emotional support and encouragement as well as professional help.

Madsen (1983) viewed writing a doctoral dissertation or masters thesis as "an intense emotional experience for all concerned - the student, his advisers, and everyone close to him" (p. 13). Connell (1985) concurred, stressing the tremendous commitment of time, energy and emotion, with the supervisor making "a powerful contribution to the success of the project if this emotional relationship can be made constructive and supportive" (p. 41). Hockey (1995), after in-depth interviews with 89 PhD supervisors in nine United Kingdom higher education institutions warned about the possibility of personal and emotional involvement as supervisors assisted their students with pastoral care. He was concerned that situations of over-involvement could influence the academic judgement of supervisors, and advocated the inclusion of pastoral care skills in supervisory training programs.

Osborne (1998) drew attention to the fact that, regardless of the area of specialisation, "thesis supervision can bring to light unresolved and new psychological issues for both supervisors and students" (p. 75). The result of this is often strong emotions, sometimes positive, sometimes negative. Osborne's concern was with the "unanticipated, unpredictable and often unconscious interpersonal difficulties that surface within the relationship" (p. 76), and that ignoring these problems if they did arise, may have an adverse effect on the supervisory process and thesis work. He highlighted that a supervisor can unwittingly take on a parental role dealing with a difficult child.

Within the literature about this emotional, interpersonal, and for some personal relationship are three interrelated and recurring concepts - supervisory style, autonomy, and power. Whilst addressing each separately, it is acknowledged that considerable overlap exists, particularly regarding supervisory style and autonomy.

2.4 Supervisory Style

There have been few studies specifically on supervisory style, and none that monitor change over time during the PhD supervisory process. In 1988(b) Powles noted the need for research on the intricacies of supervisory style in different subject areas. Generally, supervisory style means the amount of direction given to students by supervisors and the closeness of the supervision.

Often supervisory styles have been classed simply as either direct or indirect (McAleese & Welsh, 1983). There is an assumption that the indirect (non-directive) method is superior for developing independent learning in students. Heiss (1970), in a large American study involving 3,000 graduate students, found that six percent of students reported that supervisors gave too much direction, and 28 percent said they gave too little direction.

Welsh (1978), in the previously referred to longitudinal study of 64 student-supervisor pairs at Aberdeen University, identified three methods of supervision from interviews with supervisors. These were:

- (I) Highly directive in the early stages of research for all students, even the most able, then gradually diminishing as the student finds his own feet...
- (II) Directive in the initial and final stages of the research period, with a lengthy period of quiescence in the middle...
- (III) Directive throughout the entire period. (p. 82)

Welsh (1978) continued that from the student interviews, "it was clear that these categories were not extensive enough. No account had been taken of the completely non-directive method of supervision. In this method, if it may be so called, the supervisor is a remote figure to his student, providing him with the minimum of guidance and having little contact with him at any stage of the student's research period" (p. 82). With regard to close/remote and directive/non-directive supervision, the majority of students in the study tended to prefer, "for first year at least, a middle-of-the-road approach, leaning towards the close/directive" (p. 82).

In a New Zealand survey sent to 73 higher degree students in education conducted by Battersby and Battersby (1980), close and remote supervision were explored. Close

supervision was described as giving step-by-step instruction, constant direction in relation to the student's research and constant contact with the student. Remote supervision involved little contact with the student and little attempt to direct the research. The consensus of opinion for the 50 respondents (68 percent response rate) to the survey was that the supervision they had received was more remote than they would have preferred, but that the ideal supervision would include aspects of both, rather than either close or remote.

In his extensive survey study of graduate education in Britain, Rudd (1975) estimated that roughly 20 to 25 percent of research students were, rightly or wrongly, seriously dissatisfied with their supervision. He listed the negligent or neglectful supervisor as the first of five especially common reasons for student dissatisfaction. Rudd's negligent supervisor can be aligned with the remote figure described by Welsh (1978). The other four reasons students were dissatisfied with their supervision were:

1. Personality clashes between students and supervisor;
2. Poor quality supervision, where problems in the research could have been avoided;
3. Inexperienced supervisors; and
4. Supervisors, who were willing, competent and experienced, but lacked time.

Rudd (1975) found that this last category was more likely to occur when the supervisor was also a Department Head with multiple responsibilities competing for their time.

Rudd (1975) also evaluated the closeness of supervision during the early and important stages of reading and planning the research project. Nearly half of the students said that they were not supervised closely enough during this period, with the dissatisfaction highest in social studies (51 percent) followed by arts (41 percent), applied science (39 percent) and pure science (34 percent).

Moses (1984) acknowledged that supervisory styles varied. She described them as varying from strongly directive to laissez-faire with the supervisor waiting for the student to seek advice. In 1981(a), Moses found some subject-specific differences in the structure and direction given by supervisors and expected by students, with more supervisory direction and involvement in science than in social science and arts. Thus, in 1985, Moses concluded, "students and supervisors vary in the degree of autonomy they expect or grant. In some disciplines the conventions and practicalities dictate

stronger direction than in others. But the differences within disciplines may be greater than the differences between disciplines. You might have one student who needs direction in all stages of the research, another who needs and wants very little, and a third whose need varies depending on the stage of the project" (p. 9). Holdaway et al. (1995) also concluded after their study on the supervision of graduate students that the positions held by individual supervisors within a discipline tended to be highly variable, and that the nature of graduate supervision was quite idiosyncratic. Cullen et al. (1994) highlighted that individual variation can override disciplinary differences, and suggested caution in deriving strategies and advice for good practice from generalised descriptions, which mask the complexity of the situation.

That the amount of direction given to students is of concern to supervisors as well as students was highlighted during seminars/workshops (Moses, 1984). The most frequently suggested topic for discussion by supervisors was:

Amount of supervision or direction, e.g. extent of help given to students considering that students should be doing a piece of original research; amount of input into the drafting and writing, correcting of the thesis; balance of responsibility between supervisor and student; amount of independence of action students need or can be allowed. (p.158)

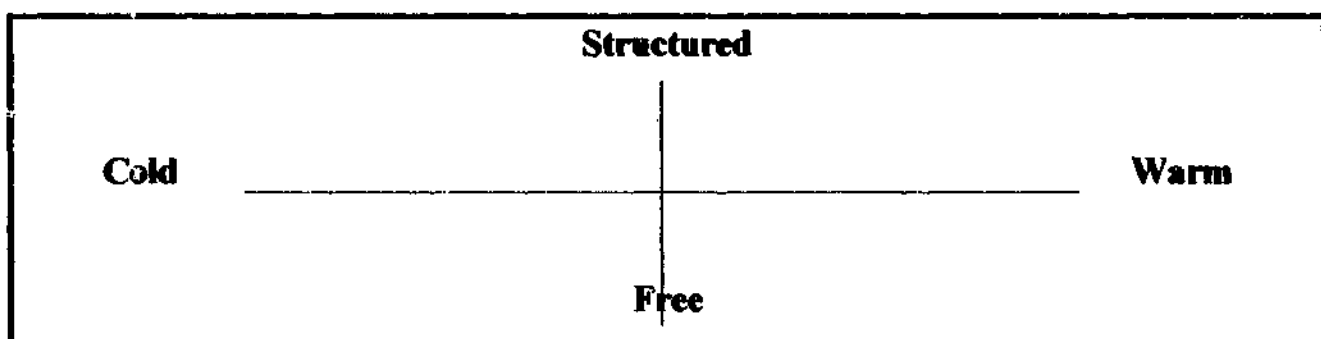
Moses at that time described supervision as accompanying "the student on the journey to competence in independent research work, assisting, guiding and directing or interfering where necessary" (p. 164). She noted that there are different starting points for different students making variation in supervision necessary. In 1985 she advised supervisors that they need not be wary of giving students step-by-step directions so that they can overcome hurdles, but not to jump the hurdles for students. Students also need particular guidance on when to stop data collection and analysis, when to start drafting the thesis, and how to structure it (Moses, 1992b).

Burgess, Pole and Hockey, in their 1994 study in nine United Kingdom universities, found supervisors adopted a flexible approach to supervision in an attempt to meet the various needs of individual students. This flexible approach was based on the supervisor's assessment of the intellectual ability and expertise of the student, the supervisor's own doctoral experience and the stage of the research.

Students in Friedman's (1987) American study saw supervisors as falling predominantly into one of three categories: mentors, conscientious supervisors or nominal supervisors. Five of the 33 students in the study agreed that their supervisors could be termed mentors, 19 saw their supervisors as conscientious supervisors with the remaining nine having what they considered to be nominal supervisors. Friedman's conscientious supervisor category could be lined up with all of the three methods of supervision put forward by supervisors in Welsh's (1978) study. The nominal category is the same as Welsh's "remote figure" and Rudd's (1975) "negligent" supervisor. The mentor is put forward as a category that has not been mentioned previously. That neglectful, and even exploitative, supervision does occur is highlighted by Witton (1973, 1974) and Chapman (1974). Glasner and Mugford (1978) described two different supervisory styles, the bureaucrat and the entrepreneur. They suggested that there are pathological or deviant forms of these styles, the obstructionist and the buccaneer, which exploit students.

Brown and Atkins (1988), in their article reviewing reports and research studies on supervision, proposed a model to plot different styles of supervision based on the complementary dimensions of structured direction and friendliness.

Dimensions of supervisor style (Brown & Atkins, 1988, p.122)



Brown and Atkins (1988) suggested that the least preferred style is "the cold and free approach". They also suggested that a free approach, even combined with warmth, may not be popular either. They considered the most popular style as "the one which coupled personal warmth with professional guidance" (p. 122).

Walford (1981) viewed supervisory style based on a supervisor's role as "an inadequate base for understanding the complex relationship between student and supervisor" (p. 156) and highlighted that the supervisory style that may be excellent for one student may be bad for another. Walford used Bernstein's (1971, 1977) concepts of classification and framing to indicate "a way of looking at the process of constructing, developing and organising a research project by both the student and the supervisor" (p. 148). The concepts of classification and framing were extended and applied to postgraduate education. Classification means how closely specified the student's research project is, and how clearly differentiated it is from the work of others. Framing means the degree of control possessed by the supervisor or student over the selection and progress of the research. For example, if there is strong classification and framing, then the supervisor exercises greater power and control than if the converse were true.

Power and control over research projects (Modified slightly, Walford, 1981, p. 153)

STRONG		
Individual projects	F	Group projects directed
Directed by supervisor	R	by supervisor
	A	
	M	
STRONG	C L A S S I F I C A T I O N	WEAK
Individual projects	N	Vague projects
Directed by student	G	directed by student
	WEAK	

Walford limited his analysis to a single discipline (experimental physics) "so the gross differences that occur simply due to the very different nature of research in the Arts and in the Natural Sciences, for example, are eliminated" (p. 148). He argued that an important source of dissatisfaction with supervision stems from disagreements about the strength of classification and framing, and that preferences regarding classification and framing should be taken into account in matching research students and supervisors. He concluded, "successful supervision does not appear to depend on the absolute strengths but on agreement of expectations between the supervisor and student throughout the research period" (p. 151).

The need for a matching of style between supervisor and student was also suggested by others, and Rudd (1975) noted personality clashes as one source of student dissatisfaction with supervision. E. Phillips (1979) and Phillips and Pugh (1987) suggested that supervisory style directly affects the approach to research, and described a situation of frustration and doubt for both student and supervisor when mismatching of styles occurs, for example, an autonomous but slow student with a directive supervisor who wants quick progress. A matching of student and supervisor on some aspect of "working style" was suggested (Phillips & Pugh, 1994; Welsh, 1983). Moses (1981a, 1984) saw the need to match the student and department, as well as the student and supervisor, and stressed the importance of clarifying expectations on both sides early in the supervisory process. She also considered that supervisors should to some extent vary their style to accommodate the needs of different students undertaking different projects, and for the same student at different stages of the project. This may be difficult for some supervisors. Wright and Lodwick (1989) found that some supervisors have their own style of supervision, which they apply to all research students. As previously documented Elton and Pope (1989) attributed low attrition to their matching of student and supervisor for personal and academic compatibility. They introduced the concept of collegiality, an attitude of mutual responsibility where students work with, not for, supervisors.

Armstrong, Allinson and Hayes (1997) reported a preliminary study on the allocation of students to supervisors on the basis of the cognitive styles of both parties. The study involved 101 fourth year undergraduate students in business administration who were required to conduct a project and their 11 project supervisors. No clear-cut evidence to support the matching of students and supervisors on this basis was found.

Manderson (1996) suggested that students should assess their own needs and the capacities and limitations of potential supervisors before deciding on an appropriate supervisor. He cautioned that students should attend to their intellectual, rather than personal needs, and advised against choosing not a supervisor, but a friend. His reasons were that the roles of friend and supervisor differ, and that the power dynamic between supervisor and student makes friendship difficult.

Holdaway et al. (1995) after their questionnaire survey of 736 supervisors at 37 universities in Canada enumerated ten practices supervisors perceived as most important for assisting students to complete within a reasonable time. One of these was to hold regular progress meetings. Powles (1989) and Moses (1992b) have also identified the importance of regular supervisory meetings. Another important practice perceived by supervisors in the Holdaway et al. (1995) study was to provide balance between supervisor's direction and student's independence. The amount of direction given to students by supervisors and the closeness of the supervision impinge on the issue of student autonomy, which will now be reviewed separately.

2.5 Autonomy

Autonomy means the ability of the student to manage their research project, that is, to choose the topic and methodology, and the amount of guidance needed by and given to the student by the supervisor during the stages of the research. It is generally accepted that PhD students in pure science disciplines function less autonomously than those in the arts/humanities disciplines in relation to choice of topic and methodology. This is because there is a greater tendency for the science student to be part of a large funded research project directed by the supervisor (see, eg, Winfield, 1987). However, as previously discussed, differences within one discipline may be as great as the differences between disciplines. This led Moses (1981a) to question whether the theses of those who had been given significant assistance should be evaluated on the same terms as students who had worked independently throughout the research.

The difficulty for supervisors in finding the right balance between autonomy and constraint for students is highlighted by many authors (eg, Moses, 1985; Rudd, 1984, 1985; Winfield, 1987). E. Phillips (1979) questioned the extent the beginning research student was an autonomous researcher or a research assistant, and when the change occurs. Phillips and Pugh (1987) pointed out that supervisors expect their students to be independent. On the other hand students expect to be supervised. Moses (1985) agreed that the planning of the research project is the student's responsibility. However, she believed that the student can rightly expect advice, counsel, the questioning of decisions, encouragement and critical feedback. Rudd (1984, 1985) highlighted the dilemma for, and the disagreement among supervisors, about how much help and advice

to give students. Many believed leaving students to struggle leads to greater learning, whilst others saw it as their responsibility to get students through, even if it meant directing them in detail throughout the research. Hill, Acker and Black (1994) examined the balance between the use of a directive supervisory style and graduate student independence in their study of supervisory practices in three United Kingdom universities. They also noted much variation in the emphasis placed on direction versus independence by individual supervisors.

After conducting case studies of seven PhD students and their supervisors, Phillips (1980) found that it was necessary for students to learn to evaluate their own work. She said that the time it takes students to do this appears to be linked to the extent supervisors allowed students to remain dependent on them. In other words, there was an inverse relationship between dependence on the supervisor (ie, amount of guidance given by the supervisor) and involvement with the research work for its own sake. Thus, when supervisors selectively limited the amount of direction and guidance given as the research proceeded, students became more involved with the research work and able to evaluate it themselves.

The amount of guidance given by supervisors is certainly a matter of concern to students. Overall student dissatisfaction with supervision has been estimated at 20 to 25 percent in Britain by Rudd (1975) and 20 to 30 percent in Australia by Moses (1984). In several studies where a breakdown of the various aspects of supervision has occurred, dissatisfaction is invariably higher in the components of supervision that relate to guidance and advice.

Barrett, Magin and Smith (1983) conducted a survey of all students enrolled in PhD and master research degrees at the University of New South Wales in 1982. There was a 56 percent response rate to the survey. Thirty-five percent of respondents expressed either some or complete dissatisfaction with regard to guidance and support in fieldwork or experimental procedures, 33.4 percent in relation to guidance and advice in topic selection, 25.2 percent in relation to availability of supervisor for consultations and 20.4 percent in relation to advice relating to writing up of the thesis. In 1988 Magin adjusted these percentages to the number of respondents answering each question, that is, he

excluded those who had responded “not applicable”. The percentages after adjustment were 43 percent, 37 percent, 25 percent and 32 percent respectively.

Nightingale (1984) surveyed all postgraduate students enrolled at the time of the study at Macquarie University. Forty percent of the respondents answered the section on satisfaction with various aspects of research supervision. In this study items identified as most likely to cause problems, that is, rated “very dissatisfied” or “fairly dissatisfied” were: guidance on statistical analysis (33 percent), guidance on research design (25 percent), guidance on fieldwork or research procedures (24 percent) and guidance on topic selection and definition (23 percent). For the other six items, slightly less than one fifth of research respondents expressed “some dissatisfaction”. The other six items were: availability of appropriate supervisor(s) in area (20 percent), frequency of face-to-face meetings (16 percent), frequency of other consultations (18 percent), guidance on bibliographic techniques (19 percent), guidance on thesis writing (18 percent) and feedback on the content of the thesis (16 percent).

Powles (1988a, 1988b) surveyed all PhD students enrolled at the University of Melbourne in 1984. There was a 62 percent response rate to the survey. Forty percent of respondents found the overall supervisory arrangements “very satisfactory”, whilst 46 percent considered them to be “reasonably satisfactory”. The rest, 14 percent, were “not satisfied”. However, with regard to specific aspects of supervision, 34 percent were “dissatisfied” with guidance on analysis, 23 percent with guidance on topic selection, research design, research methods and literature, 15 percent on guidance writing and only 3 percent in relation to freedom to plan research. This highlights that whilst students generally were happy with the amount of freedom/autonomy they were given, they often would have liked more teaching, guidance and advice. Powles (1988a) found dissatisfaction with respect to guidance to be greatest in the early stages of the degree.

Powles (1989) also surveyed the 1979 cohort at the University of Melbourne and their supervisors. The highest dissatisfaction ratings given by the students in this study were for guidance on research design (48 percent), field/research procedures (43 percent), topic selection and definition (30 percent) and analysis and interpretation (30 percent).

In 1994, Powles surveyed all participants in the Australian Postgraduate Awards (Industry) Scheme since its inception in 1990. Sixty percent of student respondents expressed overall satisfaction with supervision, 23 percent were undecided and 17 percent dissatisfied. Once again there was greater dissatisfaction relating to guidance, eg, guidance on: research design (26 percent), literature (22 percent), topic definition (22 percent) and analysis (21 percent). Once again students were generally happy with the amount of freedom they were given to take the initiative, with only 6 percent expressing dissatisfaction.

These studies highlight that from the student's point of view, significant percentages desire more guidance and advice with their research than supervisors are currently providing. Assuming that supervisors have the necessary expertise, why are they not assisting their research students to develop autonomy? They may belong to the group of supervisors that believe students learn more if they are left to their own resources. Or, for a variety of reasons, they may belong to the previously described "negligent", "nominal", "remote figure" supervisor group.

Aggravating the problems of a clash of styles and the amount of guidance desired by students and offered by supervisors, is a power imbalance between supervisor and research student.

2.6 Power

Underpinning the supervisory relationship is a power differential that Lowenberg (1969) has suggested is largely unconscious and unanalysed. He described the situation during graduate education as:

one of transference regression to earlier situations and fantasies of childhood, particularly in respect to authority. If the course of study is satisfactorily concluded, a reversal of this regression and its resolution to a new level of maturity will be achieved. Frequent failure to accomplish this is due to the unconscious nature of the processes involved on the part of the active partners in the working alliance of graduate study, the students and faculty. Rather than foster growth, together they too often work to counter it and perpetuate a psychology of domination and infantilization. (pp. 610-611)

Lowenberg (1969) saw the student as in the almost totally impotent position of a dependent child. He described differences for students who have been independent

adults before returning to graduate study and students who have never left the institutional setting. For the former he believed a return to graduate school represents an emotional regression, whereas the latter remain emotionally dependent and static at an age when they should be developing towards maturity. Whilst acknowledging that all graduate students will not experience difficulties coping with such a situation, Lowenberg highlighted the need to raise the consciousness of the emotional dimension of graduate study.

The series of chapters in "Scholars in the Making" edited by Katz and Harnett (1976) represents the only major attempt to remedy this situation. This largely empirically based volume focused on the student's personal as well as intellectual development, and dealt with the social and psychological problems associated with learning for the graduate student. Katz and Harnett (1976) described the indeterminate status of the graduate student. Lozoff (1976) acknowledged that students wanted autonomy, but were kept in a state of prolonged dependence on the powerful and parent-like figures of faculty members. For students there was seen to be a struggle between the desire for autonomy and the requirements of authority. Taylor (1976) discussed the problem of unclear authority in the equivocal relationships students can have with their professors. She believed that the unclear authority relationships have the potential to hurt students. From the professor's perspective there is a lack of clarity regarding the status of the graduate student, colleague or subordinate, which causes a seesawing between two ways of behaving towards students. From a student's point of view, their dependence is continuous and subtle. It develops from the need for intellectual approval by superiors whose judgement is esteemed. Taylor highlighted that these relationships have to be continuously renegotiated. Walford (1981) stressed this also. He saw satisfactory supervision as dependent upon initial agreement and future negotiated changes regarding the power and control each person has.

Welsh (1978) described the possibility of role conflict in the supervisory relationship. The supervisor, in his daily work, usually has to alternate between teaching undergraduate and postgraduate students, necessitating switching teaching styles. The postgraduate student is unclear about his status as student or pseudo staff member. G. Phillips (1979) acknowledged that the needs of the professor have ascendancy when conflict occurs. Osborne (1998) also recognised that power resides mainly with the

supervisor, and that supervisors are usually more important to their students than those students are to them. However he believed that "thesis supervision should be governed by shared goals so that both parties are working with a common interest and thereby avoiding unnecessary power struggles" (p. 84). The relationship should be based on mutuality rather than domination and submission. Booth (1994) talked about the difficulty of finding the "delicate balance":

What is the proper balance between an honest acknowledgement of one kind of symmetry ("we're both ignorant; we're both inquiring; we both make mistakes; we're in this business together") and a proper acknowledgement of asymmetry ("I do after all believe that I have something valuable to offer you, though you will not be able to 'receive' it unless you do what is necessary to make it your own"). (p. 34)

Kirstin, when reflecting on her own experience as a PhD student, acknowledged that the power relationship between students and supervisors could make it difficult for supervisors to make suggestions to their students. Students may interpret the suggestions as stronger directives or orders. It was important to Kirstin that her supervisor let her make the final decision, even when this involved rejection of his suggestions (Luebs, Fredrickson, Hyon & Samraj, 1998).

E. Phillips (1979) addressed the question of what actually happens during a PhD research program. She conducted interviews with a small sample of postgraduate students and their supervisors over a period of two and a half years. From this research she concluded "the student must learn either to conform to the supervisor's expectation of how he will conduct his work and thus raise the probability of attaining the PhD degree or, if he cannot conform to the supervisor's expectation, he may drop out " (p. 413). That this may occur was demonstrated by Jacks et al. (1983) when they interviewed 25 research students who had discontinued their studies. They found abuses of imbalances of power to be possible, and suggested some form of protection and redress for students.

The only study that has approached the issue of power in the supervisory relationship directly is a small study conducted by Harrow and Loewenthal (1992). They included a consideration of power relationships in supervision "because the question of the powerful role which academic supervisors play in their tutees' lives does not seem to be addressed in the supervision literature" (p. 56). They used as their theoretical base

French and Raven's (1959) categorisation of power sources as applied by Lee and Lawrence (1985). Thus the lecturer's power source could be seen as legitimate (authority as institution's representative), reward and coercion (ability to give good and bad marks), referent (liked and respected by students) and expert (knowledge and ability). The majority of respondents in the study saw expert power, closely followed by referent power as the preferred power sources. This was only a small study with 14 respondents out of a sample of 25. There were also some methodological concerns, which were acknowledged by the researchers.

Heinrich (1995) presented the findings of a phenomenological study of the relationships 22 female graduate students had with female dissertation committee advisors. She found that themes related to power emerged and identified three types of supervisory relationships in terms of the use of power:

- (1) "power with" relationships between professional friend advisors and colleague advisees, (2) "power over" relationships between iron maiden advisors and handmaiden advisees, and (3) "power disowned" relationships between negative mother advisors and good daughter advisees or between inadequate advisors and overadequate advisees. (p. 451)

The first type of relationship, professional friendship, was the most successful and rewarding for the participants in Heinrich's study. She referred to the other two types of relationship as betrayal relationships. Bartlett and Merger (2000) in their article entitled "Reconceptualising discourses of power in postgraduate pedagogies" described their journey in transforming their own supervisory relationship from the latter into a professional friendship. They acknowledge that the supervisory relationship "necessarily and fruitfully involves complex and dynamic negotiations around power" (p. 196).

Some student and postdoctoral fellow participants in the Cullen et al. (1994) study acknowledged that the issue of power in the supervisory relationship does need examination. They suggested those issues of power and control in facilitation and educational relationships require exploration, although they acknowledged these topics were seldom raised in such settings.

2.7 Chapter Summary

This chapter, Chapter 2, has presented a review of the literature relevant to the study up to the period of data collection for this study (1995). Subsequent literature will be presented and discussed in relation to relevant findings in the three result chapters of this thesis. Important issues in the literature include differing or divergent opinions regarding:

1. The level of expertise supervisors need in the substantive area of the student's research;
2. The types of relationships that should be, and are developed between supervisor and student. Supervisors in particular were concerned about developing personal relationships with students;
3. Students' and supervisors' perceptions about the relationship, with supervisors generally more positive than students; and
4. How involved supervisors should be in their students' research with subsequent effects on student independence.

Evidence existed that a good interpersonal relationship and supervisor support was important in relation to:

1. How research degree students perceived their overall graduate experience;
2. The quality of the thesis;
3. The time taken to complete the thesis;
4. Success or failure in gaining a PhD; and
5. Preventing intellectual and social isolation.

A good supervisory relationship and supervisor support was of particular importance to students in their first year of PhD study. Some evidence existed that female faculty may be important for female graduate students.

Students generally appear to want a middle-of-the-road approach to the amount of supervisory guidance and direction provided; also the closeness of supervision. They seem however, to exhibit a slight preference for directive and close, particularly early in their candidature. Disciplinary differences were evident with closer and more directive supervision in science disciplines than arts and social science. Despite this, significant individual differences were highlighted, even within disciplines. When students were

dissatisfied with their supervision, complaints about lack of supervisory guidance were prominent.

Some arguments were presented for matching students and supervisors for personal and working relationship aspects in addition to research interests. Evidence also exists that emotions can become intense during the supervisory relationship and process, and that a power imbalance needs to be managed and negotiated by PhD supervisors and students.

Chapter 3, Methodology, follows. It presents a description of the methods and procedures used to collect data for this study.

Chapter 3 – Methodology

3.1 Introduction

Following the literature review for the study in Chapter 2, this chapter presents and discusses the methods and procedures employed in the gathering and analysis of data. These include the rationale for the research design and methods, the longitudinal nature of the study, the sampling strategy and recruitment of participants, the instruments and procedures for collecting data, ethical matters and the analytical approaches used. The framework for the analysis and presentation of data is described.

3.2 The Research Design

The research design for this study was an exploratory and descriptive survey. Exploratory studies provide an in-depth exploration of a single process, variable or concept (Brink & Wood, 1994) such as the supervisory process. Descriptive studies examine one or more characteristics in a specific population (Brink & Wood, 1994). Survey research is non-experimental research that obtains information regarding the activities, beliefs, preferences and attitudes of people through direct questioning of a sample of respondents (Polit & Hungler, 1999). LoBiondo-Wood and Haber (1998) say exploratory and descriptive surveys collect detailed descriptions of existing variables and use the data to justify and assess current conditions and practices to make more intelligent plans for improving practices. Burns and Grove (1999) suggest that a descriptive design may be used for the purpose of developing theory, identifying problems with current practice, making judgements, or determining what others in similar situations are doing. Its purpose is to provide a picture of situations as they naturally happen. This study aims to explore and describe the patterns that are evident in the relationships PhD students and supervisors develop and the ways they work together. Therefore, an exploratory and descriptive survey design is appropriate.

Usually the word “exploratory” indicates that not much is known about the area (Brink & Wood, 1994). Research degree supervision is well documented in the international

literature. However much of the literature is not research based; it is based on learned opinion. In addition, many of the research studies use quantitative methodologies. Whilst acknowledging that questionnaire surveys offer an opportunity to collect information on a broad scale and examine patterns of experience, Anderson and Swazey (1998) admit that for studying the doctoral experience, there is no substitute for on-site interview or observation-based data collection. There is a dearth of in-depth, longitudinal research studies on the PhD supervisory relationship and process. As stated by Hockey (1994) "knowledge about the actual PhD process is limited" (p. 177).

To understand the patterns that are evident in the relationships PhD students and their supervisors develop and the ways they work together, both quantitative and qualitative, but predominantly qualitative methods of data collection were employed over time. This means a longitudinal study. Cresswell and Miller (1997) referred to the combining of interpretive or qualitative approaches to research with positivist or quantitative appraises as pragmatic approaches. Elton and Pope (1989) have acknowledged the paradigm shift of social research during the 1970s to more qualitative methodologies that facilitate the investigation of personal and interpersonal factors. This paradigm shift has continued and strengthened in the 1980s and 1990s. The necessity to monitor change over time, and thus for a longitudinal study, has been highlighted in the literature.

3.2.1 The Need for a Longitudinal Study

The need to negotiate and renegotiate the supervisory relationship over time was explained by Taylor (1976) and Walford (1981). Rudd (1975) found students on the whole more satisfied with the closeness of supervision once past the initial stages. McAleese and Welsh (1983) also described changes in student dissatisfaction with various aspects of supervision over the course of their studies. Phillips (1980) described students' increasing ability to evaluate their own work, as they became less dependent on their supervisors. Heinrich (1991) and Powles (1988b) recommended longitudinal studies. Powles indicated that a longitudinal study would "yield a wealth of data on the stages of the degree, supervisory practices and so on, which could facilitate diagnosis of weak or pressure points" (p. 39). Harrow and Loewenthal (1992) cited the inability to explore preferences and experiences changing over time as one methodological flaw in their study. Thus, because things change over time, a longitudinal study was undertaken.

3.3 The Sample

3.3.1 Rationale

The population for this study was PhD students and their main supervisors. Brink and Wood (1994) argue that exploratory descriptive studies often require non-probability samples. Because of the exploratory nature of the study, flexibility of the data collection methods is needed. The problem associated with non-probability sampling is that the sample may or may not accurately represent the population. The extent to which the results can be generalised may therefore be called into question (Holloway, 1995; Polit & Hungler, 1999). However, in studies that use in-depth unstructured or semi-structured interviews, research degree students can use a small purposive sample and still gain the rich and deep data that they need (Holloway, 1995). Therefore after careful consideration, it was decided to use a purposive sample for this study.

In his study on classification and framing, Walford (1981) limited his sample to one discipline, experimental physics, so that gross differences that occur because of the different nature of research in different disciplines were eliminated. In this study, several, but not an exhaustive number, of different disciplines were selected, so that differences within disciplines could be contrasted with those between disciplines. A purposive sample allowed the researcher to include representatives from different disciplines. The faculties that were chosen were Arts, Business and Economics, Computer and Information Technology, Engineering and Science.

Matched student and supervisor pairs were necessary to link the experience of student and supervisor. There have been several studies involving matched student-supervisor pairs (Friedman, 1987; Goulden, 1991; Heinrich, 1991, 1995; E. Phillips, 1979, 1980; Pole, Sprokkereef, Burgess and Lakin, 1997; Powles, 1989, 1994; Welsh, 1978, 1979; West et al., 1988; Wright & Lodwick, 1989). Most have been small studies, and only a few (E. Phillips, 1979, 1980; Powles, 1994; Welsh, 1978, 1979; Wright & Lodwick, 1989) longitudinal. Of these, only one is Australian (Powles, 1994) and the study uses a fundamentally quantitative questionnaire to collect data. The others were all in the United Kingdom. In linking the experiences of matched student-supervisor pairs, it has already been noted that perceptions can differ (Powles, 1994; West et al., 1988).

Morse (1991) advises that the method of sampling needs to be both appropriate and adequate. Appropriateness means that the method of sampling fits the aim of the study and helps the understanding of the research problem. A sample is adequate if it generates sufficient quality data on which justifiable conclusions can be based. It is submitted that a purposive sample of PhD student-supervisor matched-pairs from a variety of disciplines meets the requirements of appropriateness and adequacy.

3.3.2 Recruitment

Students who were enrolled in PhD degrees at a large Australian university and their main official supervisors formed the sample for the study.

Several departments from a variety of disciplines with different research cultures and located in the five previously named faculties were selected. Full-time students in the selected departments who, at the time of commencement of the study, were approximately 12 months into candidature and part-time students in the selected departments who, at the time of commencement of the study, were 18-24 months into candidature were invited to participate in the study. The official main supervisors of these students were also invited to participate.

The invitation was via an Explanatory Letter (see Appendix 1 for the Explanatory Statement for PhD Supervisors and Appendix 2 for the Explanatory Statement for PhD Students) inviting them to participate in the study and outlining the requirements of participation. A simple questionnaire, the Role Perception Rating Scale (RPRS) developed by Moses (1981a) was enclosed with the Explanatory Letter (see Appendix 5 for the RPRS). Also enclosed was a Consent Form (see Appendix 4 for the Consent Form for PhD Students and Appendix 5 for the Consent Form for PhD Supervisors). PhD students and supervisors willing to participate completed and returned the completed questionnaire (RPRS) and Consent Form plus provided names and contact information.

The Explanatory Letters, Consent Forms and questionnaires (RPRS) were mailed to PhD students who met the above criteria and to their main supervisors by the Research Training and Support Branch of the University. This was done after the study had received approval from the University's Standing Committee on Ethics in Research on Humans and with the

approval of the University's PhD and Scholarships Committee. The reason for this process was to maintain anonymity for potential study participants. Unless a PhD student or supervisor contacted the researcher, she was unaware of their existence.

Thus a number of student-supervisor matched-pairs representing a variety of disciplines, nationalities, etc. formed the study sample. When both the student and their main official supervisor did not agree to participate in the study, the student or supervisor not making up a matched-pair was thanked for their interest, but took no further part in the study.

3.3.3 The Participants

The participants in this study were 21 PhD students and 18 supervisors forming 21 matched-pairs or dyads. Three of the supervisors were supervising two student participants. They were from five faculties in a large Australian university.

Eleven of the students were female and 10 male. Their enrolment status was fairly evenly divided with 13 full-time and eight part-time students. Twelve of the full-time students were supported by scholarships. Family and part-time work supported the other full-time student. The part-time students were working, mostly full-time, but some part-time. One full-time student commenced candidature in 1994 and another nine in 1995. The remaining three full-time students upgraded from a masters to PhD degree in 1995. Four part-time students commenced candidature in 1994. Two part-time students transferred from other universities in 1994, one following a supervisor after a change of employment, and the other because of a change of direction in his research. One part-time student enrolled in one faculty in 1992 then transferred to another faculty in 1994. The remaining part-time student upgraded from masters to PhD degree early in 1996.

Eighteen supervisors also participated in the study, four females and 14 males. The 21 students and 18 supervisors formed 21 matched-pairs or supervisor-student dyads.

As mentioned, the participants in the study were from five faculties. Twelve students were from Arts, two from Business and Economics, two from Computer and Information Technology, four from Engineering, and one from Science. Arts Faculty students and their supervisors were more inclined to agree to participate in this study than students and supervisors from other faculties. The reason for this is not known. A

possible explanation is that student-supervisor dyads from the Arts Faculty tend to work in isolation and welcomed being involved in the research. As the numbers from faculties other than the Arts Faculty were small, these faculties were grouped together by the researcher and referred to as the "other faculties". Thus there were 12 supervisor-student dyads from the Arts faculty and nine supervisor-student dyads from the other faculties. It is worth noting that this longitudinal study did not lose any of its participants.

More information about the PhD students and supervisors that participated in this study will be provided in Chapter 4, Antecedent Conditions.

3.4 Data Collection

3.4.1 Instruments

In survey research either questionnaire or interview can be used to collect data (Polit & Hungler, 1999). This study used both methods of data collection, but predominantly interviews.

The RPRS developed by Moses (1981a) was used to collect quantitative data regarding PhD students' and supervisors' expectations of the supervisory relationship and process. The RPRS was sent to prospective study participants with the Explanatory Letter and Consent Form. Whilst Moses (1981a) did not design the RPRS as a research instrument, it was thought that PhD students' and supervisors' responses might provide some insights during this longitudinal study. The RPRS was devised as a discussion trigger for workshops conducted by Moses. The RPRS is composed of 11 diametrically opposite statements (see Appendix 5). Respondents indicate on a scale from one to five their agreement with these opinions. A score of one usually represents agreement with structure imposed by the supervisor and with comprehensive supervisor responsibility. A score of five usually represents support for student responsibility and freedom. An undecided or negotiated position is represented by a score of three.

Qualitative data were collected over a period of three years (from November 1995 to October 1998) via semi-structured face-to-face interviews. Interviews were chosen for several reasons. Morse and Field (1996) point out that semi-structured interviews are

useful because the technique ensures that the researcher will obtain all the information required, while at the same time participants have freedom to respond and illustrate concepts. Interviews also permit the clarification of questions that are misinterpreted by participants. Interviews allow the feelings of participants to come across, and ensure that no important points are omitted. The researcher is able to follow up participants' responses. Grbich (1999) points out that a guided interview's major purpose is to provide a minimally directive framework that enables both researcher and informant to access and identify key areas. Thus semi-structured interviews permitted the researcher to understand the process of PhD supervision generally, and the relationship PhD students and their supervisors develop and the ways they work together. Any unanticipated leads were followed up at the time.

But interviews also have disadvantages. The classic methodological problem with them is that the resulting data are based on self-reports. Respondents have not always carried out the actions they say they have when interviewed (Hockey, 1996b). Delamont, Parry and Atkinson (1998) agree and suggest caution in interpreting interview data. Complementary observational data are necessary to accurately reflect what students and their supervisors do (Delamont et al., 1998; Hockey, 1996b). Observation of the interaction between PhD supervisor and student was not considered an appropriate method of data collection for this study because of the intrusion of a third person into what is a very private relationship, and the fact that conscious behaviours may change with the presence of the researcher.

Interview guides (see Appendix 6 for the Interview Guide for PhD Students and Appendix 7 for the Interview Guide for PhD Supervisors) were based on an extensive literature review. They were designed to examine such issues as allocation of supervisors to students, personal and interpersonal aspects of the supervisory relationship, power relations, and supervisory style and student autonomy. In order to achieve as much depth as possible, questions with varying degrees of structure were combined to elicit responses in each area of interest. The first part of each interview guide had questions used to collect demographic data.

Content validity of the interview questions was established in two ways. First the questions were based on the literature and the research questions. Secondly, the questions were tested in a pilot study. The interview guide was pre-tested prior to the study to determine that the

questions were clear and related to the study's purpose, and to ensure that the interviewer asked the questions consistently. It also gave the researcher an opportunity to gain experience in the skills necessary for face-to-face interviews and using a tape-recorder. In the pilot study one PhD supervisor and two PhD students who were not part of the sample for this study were interviewed. Some minor adjustments were made to the interview guide after the pilot study.

3.4.2 Procedures

The RPRS questionnaire (Moses, 1981a) was sent to prospective participants with Explanatory Letters at the commencement of the study. Completed RPRS's were returned with signed Consent Forms that provided contact information for the researcher to contact participants and arrange interviews.

Separate interviews took place for each student and their supervisor. All interviews occurred between November 1995 and October 1998, the data collection period for this longitudinal study. Interviews were conducted for full-time students and their supervisors at approximately 12 months after enrolment, then every 12 months until completion or withdrawal (if this occurred) or the data collection period for the study ended. Interviews for part-time students and their supervisors were scheduled for 18 to 24 months after enrolment and every 12 months until completion or withdrawal (if this occurred), or the data collection period for the study ended. Final interviews with students and supervisors occurred at the completion of the PhD or withdrawal from candidature. Many students were still continuing with their studies. These students and their supervisors had three interviews during the data collection period.

Second and third interviews were based on the same interview guide as the first interview. Prior to second and third interviews, the researcher listened to the previous interview with each particular participant. Issues related to particular participants were then followed up. In addition, issues raised by several participants were followed up with all relevant participants. For example, whether supervision incorporates teaching (which was followed up with all participants), and whether supervisors supervise the way they do because of the supervision they received when they were PhD students (which was followed up with all supervisor participants). Three students experienced a permanent change of supervisor during the data collection period; the researcher had one interview with each of the new

supervisors. A total of 113 interviews were conducted, 60 with students and 53 with supervisors. Fewer interviews needed to be conducted with supervisors because three supervisors were supervising two students.

Interviews were arranged at mutually convenient times and at venues to suit the participants. All interviews with supervisors took place at the University, usually in the supervisor's office. Interviews with students took place either at the University or the student's home. Interviews were mostly of one hour's duration. All interviews were conducted face-to-face except two. One international student was very busy as she prepared to fly home on write-up-away status. One supervisor missed a scheduled appointment with the researcher. Both of these participants subsequently had phone interviews rather than face-to-face interviews on this one occasion only. All interviews except three were tape-recorded with the participant's permission. The two interviews that were phone interviews were not tape-recorded. Also one of the new supervisors who took over supervision from someone else was not comfortable with tape-recording the interview. Notes were taken during these three interviews with the participant's consent. The researcher assured all participants that matters discussed in the interview would be confidential. Tapes and interview notes were labelled with pseudonyms. Only the researcher has access to the actual identities of participants. Participants were also assured that the findings of the study would be reported using themes that arise from the data, and that it would not be possible to identify the individuals who provided the information, or the departments involved.

By collecting data in an ongoing manner over a number of years from PhD student and supervisor matched-pairs, an in-depth picture of the supervisory relationships and ways students and their supervisors work together was obtained.

3.5 Ethical Considerations

The key ethical issues for participants in this study were informed consent, voluntary participation, freedom from harm, and confidentiality. These were treated as follows.

Prospective participants were each sent an Explanatory Letter (see Appendix 1 for the Explanatory Statement for PhD Supervisors and Appendix 2 for the Explanatory Statement

for PhD Students). The Role Perception Rating Scale (see Appendix 5 for the RPRS) and a Consent Form (see Appendix 4 for the Consent Form for PhD Students and Appendix 5 for the Consent Form for PhD Supervisors) were included with the letter. This was sent by the Research Training and Support Branch. At this stage the researcher did not know the identities of prospective participants. The voluntary nature and requirements of participation were outlined in the Explanatory Statements for PhD students and supervisors.

PhD students and supervisors willing to take part in the research completed the Role Perception Rating Scale, signed the Consent Form, provided contact information and returned these to the researcher in a reply-paid envelope. Supervisors and students who formed matched-pairs then constituted the study sample. Unless both student and supervisor were willing to take part in the study, the student or supervisor not forming a matched-pair was thanked for their interest, and did not take any further part in the research.

Interviews were arranged at a mutually convenient time and a place to suit participants. Supervisor and student interviews were conducted separately. Interviewees were assured that the information they provided would remain confidential. Interviews were tape-recorded when participants were willing. Otherwise, interview notes were taken. Tapes and interview notes were marked with fictitious names. The researcher is the only person who has access to the true identities of participants.

Data are stored in a locked filing cabinet at the researcher's home. The list that matches participant to tapes or interview notes is kept separately and also safely locked. Data will be destroyed after the five-year storage requirement has been met.

The findings of the study are reported based on a thematic analysis of the data. It should not be possible to identify the individuals who provided the information, or the departments, in which they work or are enrolled.

The University's Standing Committee on Ethics in Research on Humans gave ethical approval for the research based on the above procedures provided the researcher did not collect data from participants in the faculty she worked in, or the faculty in which she was

enrolled as a PhD student. The Committee also stressed the importance of reporting the findings of the study in a manner that could not lead to the identification of individual participants or departments.

3.6 Data Analysis

Analysis of the narrative interview data and presentation of the findings as a series of PhD student-supervisor case studies was rejected because it was thought that presenting the findings as case studies might lead to identification of participants. Also pseudonyms are not used in the presentation of the findings for this reason. It was thought that pseudonyms would facilitate the tracking of a particular student or supervisor and perhaps lead to their identification. After careful consideration, it was decided to use certain aspects of an educational evaluation model proposed by Stake (1967) as a framework for the data analysis and presentation of findings for this study.

3.6.1 Framework – Stake's (1967) Education Evaluation Model

In 1967 Stake proposed a model of evaluation relevant to any educational curriculum or process. Within Stake's (1967) model, data fall into three categories: antecedents, transactions and outcomes. Antecedents are any conditions which exist prior to teaching and learning, and which may relate to the outcomes. For example, a PhD student's educational background and a supervisor's previous experiences supervising PhD students would be antecedent conditions for the PhD supervisory process. Transactions are the countless encounters, the succession of engagements that comprise the process of education. For the purpose of this study the encounters are between PhD student and supervisor and the process of education is the supervisory process. Outcomes are the consequences of education. Outcomes are, for example, the abilities, attitudes and achievements of students resulting from an educational experience. In this instance the outcomes will be the abilities, attitudes and achievements of the PhD students and supervisors at the end of the supervisory process.

Stake (1967) criticised traditional formal evaluation methods in education for not indicating antecedents (prior conditions) and transactions and coupling these to the various outcomes.

Antecedents, transactions and outcomes formed the framework for the analysis of the qualitative, narrative interview data from this study. Each is presented in a chapter containing the relevant findings. The antecedent conditions for the PhD students and supervisors are presented in Chapter 4, Antecedent Conditions. The transactions that took place between PhD students and supervisors during the supervisory process are presented in chapter 5, Supervisory Transactions. The outcomes of the supervisory process for PhD students and supervisors are presented in Chapter 6, Outcomes. As suggested by Stake (1967) the outcomes are then related to the antecedents and transactions.

3.6.2 Data Management

The data arising from this longitudinal study included 39 completed Role Perception Rating Scales, 21 from PhD students and 18 from their supervisors. This longitudinal study also resulted in qualitative narrative interview data from 113 interviews. All but three interviews were tape-recorded.

3.6.2.1 Role Perception Rating Scale (RPRS) Data

The completed RPRS's were checked to see that all items were completed and responses were legible. Each completed RPRS was then given an identification number so that PhD students and supervisors could be linked to each other and faculties. They were then filed in a folder.

3.6.2.2 Interview Data

The researcher listened to tape-recorded interviews at least three times. A detailed, but not verbatim transcription of each tape was then made. Significant quotes were documented verbatim. This data, along with interview notes taken for the three interviews that were not tape-recorded, were then separated into antecedents, transactions and outcomes. Identification numbers were recorded on each section as it was subdivided, so that the researcher could still link the data to a particular respondent and relate the information provided by a student-supervisor dyad.

3.6.3 Analysis

3.6.3.1 Role Perception Rating Scale (RPRS) Data

Data resulting from responses to the Role Perception Rating Scale were analysed in two ways. First, quantitative findings were generated manually regarding students' and supervisors' expectations regarding the supervisory relationship and process. These

expectations were compared for different groups using descriptive statistics. The initial groups were "all supervisors" and "all students". These were then subdivided into "Arts Faculty supervisors", "other faculties' supervisors", "Arts Faculty students", and "other faculties' students". Secondly, the perceptions of each PhD student and supervisor comprising a matched-pair was used during the analysis of the interview data when linking outcomes to antecedents as suggested by Stake (1967).

3.6.3.2 Interview Data

The researcher had qualitative data organised in three areas: antecedents, transactions and outcomes. A search for themes or patterns then occurred in each of these areas (Polit & Hungler, 1999). The search for themes incorporated the discovery of commonalities for student and supervisor participants and also any variations in the data. Differences were explored for different subgroups and contexts. The thematic strands were then woven together into an integrated picture of antecedents, transactions and outcomes.

3.6.4 Validity

Validation of the thematic analysis involved the use of an iterative approach, participant quotes and quasi-statistics.

3.6.4.1 Iterative Approach to Data Analysis

The researcher employed an iterative approach when analysing the data (Polit & Hungler, 1999). The narrative materials generated the themes that were developed; the researcher then went back to the data with the themes in mind to ensure that the data really did fit the themes. This theme development, then back to the data, occurred several times for each theme as data were analysed. Themes were refined as necessary.

3.6.4.2 Participant Quotes

Direct quotes from PhD student and supervisor participants were used extensively in the presentation of the results of this longitudinal study to support the themes that were developed and the findings of the study.

3.6.4.3 Quasi-Statistics

Quasi-statistics are "an 'accounting' system used to assess the validity of conclusions derived from qualitative analysis" (Polit & Hungler, 2001, p. 469). A researcher using a quasi-statistical style of analysis generally begins with some preconceived ideas about the analysis and uses the ideas to sort the data. According to Polit and Hungler (2001), this approach is sometimes called manifest content analysis, that is, the researcher reviews the

content of narrative data searching for particular themes that have been specified in advance. Because a semi-structured interview guide was used for this study, this was a suitable method for this study. The result of the search is information that can be quantified by the number of participants making a particular point, hence the term quasi-statistics. Whilst quasi-statistics add validity to the analysis of qualitative data by providing the number of participant who support a particular theme and thus whether the themes are an accurate representation of the phenomena, they cannot be interpreted in the same way as statistics.

3.7 Chapter Summary

Chapter 3, Methodology has presented and discussed the methods and procedures employed in the gathering and analysis of data for this study. First, the research design, that is an exploratory and descriptive survey was described and reasons provided for its selection. Justification for a longitudinal study was also provided. The rationale for a purposive sample was presented along with the procedures used to recruit participants. A description of the PhD student and supervisor participants was provided. The types of data collected and the instruments used were described along with the procedures employed in the collection of data. Ethical considerations were discussed and appropriate measures put in place to protect the rights and privacy of participants. Both the framework and procedures used in relation to the analysis of data were presented.

Stake's (1967) model of educational evaluation, which incorporates antecedents, transactions and outcomes, was used as a framework for data analysis. This same framework is also used to present the findings from this longitudinal study. Thus there are three result chapters, Chapter 4 Antecedent Conditions, Chapter 5 Supervisory Transactions, and Chapter 6 Outcomes. The first of these three chapters, Chapter 4 Antecedent Conditions follows.

Chapter 4 – Antecedent Conditions

4.1 Introduction

Chapter 3, Methodology, introduced Stake's (1967) framework for the organisation and presentation of the results for this longitudinal study. This framework incorporates three component parts: antecedents, transactions and outcomes. Each of these component parts forms a chapter that contains the results of this study. This chapter, Antecedent Conditions, presents, describes and discusses the antecedent conditions that the students and supervisors in this study brought to the PhD supervisory process. The next chapter, Chapter 5 Supervisory Transactions, will present, describe and discuss the transactions that occurred during the supervisory relationship and process. Chapter 6, Outcomes, will present and describe the outcomes of the supervisory relationship and process. As recommended by Stake (1967) the outcomes will then be analysed and discussed in relation to the antecedent conditions and supervisory transactions. A summary and discussion of the findings will be presented in Chapter 7.

Stake (1967) describes an antecedent as "any condition existing prior to teaching and learning which may relate to outcomes" (p. 528). The supervisory process as a teaching and learning process will be explored in Chapter 5 Supervisory Transactions. Here the various antecedent conditions to the supervisory process are presented. Some relate specifically to the students, others specifically to the supervisors, whilst a third group is common to both. Stake (1967) views antecedents as relatively static. For example, a student either has a masters degree or not, a supervisor either has or has not supervised a PhD student before.

4.2 The Students' Antecedent Conditions

A number of antecedent conditions are considered to be relevant to the outcomes of the PhD supervisory process for students. These include the students' educational backgrounds and any academic activities in which they engage. Also certain demographic variables are thought to be pertinent.

4.2.1 Educational Background

Twelve of the 21 students were admitted to PhD candidature via regular academic pathways and have degrees in disciplines that are established in academia. Their PhD is also in the same discipline as their educational preparation. Four students have honours degrees. In three instances the honours degrees were obtained at the same university as their PhD candidature. One has first class honours, two have second class honours and the class of honours for the fourth student is unknown. (The class of honours was not specifically asked, but arose incidentally for three participants.) The student with first class honours acknowledged that he was academically bright. One of the two students with second class honours was upset because her supervisor would have preferred her initial enrolment to be at master's level, with an upgrade if her work was good enough. The other student with second class honours was concerned about his ability, saying that he was not a "High Distinction" student. He was one of two students who felt that they were talked into PhD studies by academic staff¹. Three students have both honours and master's degrees and five have a master's degree only. One of the master's degrees was obtained at an overseas university. Three of these students, two with honours degrees and one with a masters degree were given probationary candidature.

Five students have idiosyncrasies in their educational background for PhD candidature. One has an honours degree that is in a discipline that is not established in the academic environment. This honours degree did not have strong research focus, nor is it in exactly the same discipline as the PhD enrolment. Another has both an honours and masters degree. Both of these degrees are old (1965 and 1973) and in different disciplines from each other and from the PhD discipline. Another has an undergraduate degree in another discipline plus work experience and publications in the PhD discipline. The fourth student in this group has an undergraduate and masters degree in one discipline that is different to the PhD discipline. The work environment of this student encompasses both disciplines. The fifth student has a diploma but no undergraduate degree, and a master by publication degree. These awards are in a discipline that is not established in the academic environment and is different from the PhD discipline. Three of these students were given probationary enrolment.

¹ This issue is presented in more detail in the next chapter in section 5.2.

The six students who were given probationary candidature are required to meet certain requirements to gain full candidature. Probationary candidature is for the first year for full-time candidates or for the first and second years for part-time candidates².

The remaining four of the 21 student participants were upgraded from masters to PhD candidature. Two of these students have master's degrees from overseas universities. One has an undergraduate degree and a graduate diploma in disciplines that are different from each other and also from the PhD discipline. The fourth student in this group does not have an undergraduate degree and was admitted to candidature on the basis of a graduate diploma and publications.

4.2.2 Academic Engagement

A number of student participants are also academic staff of various universities. Two are part-time, one at the same university as the PhD enrolment, the other at another university. Three are full-time academic staff at the same university as their studies. Another participant is engaged in sessional teaching activities at another university and also discrete research consultancy projects.

4.2.3 Demographic Variables

A number of demographic variables such as age, gender, enrolment status, scholarship status and employment, and whether English is a first language or not are considered to be relevant.

4.2.3.1 Age

The age of the student participants varied from 23 to 59 at the commencement of data collection for this study. Six students were aged from 23 to 29. Only three of these six were 25 or less. Seven students were aged from 30 to 39, five from 40 to 49 and three from 50 to 59.

4.2.3.2 Gender

Ten student participants are male, 11 are female.

² The transfer from probationary to full candidature will be explored in Chapter 5 in section 5.2.

4.2.3.3 Enrolment Status

Thirteen are enrolled in their PhD studies on a full-time basis. Eight are part-time students.

4.2.3.4 Scholarship Status and Employment

Twelve of the 13 full-time students are supported by a scholarship. Some of these are working part-time in addition to the scholarship³. Her family, baby-sitting and private tutoring support the full-time student who does not have a scholarship. The eight part-time students are all employed, six full-time and two part-time. Some of them are employed in demanding and responsible positions.

4.2.3.5 Non-English Speaking Backgrounds and International Students

Four of the 21 student participants have non-English speaking backgrounds. For one of these students the main difference is cultural; she speaks and writes perfect English and is now a permanent resident of Australia. The other three are international students and they are struggling with their English, both verbal and written, as well as with cultural adjustments.

4.2.4 Summary

Twelve of the 21 student participants were admitted to PhD candidature via typical academic pathways. Three of these were given probationary candidature. A further five have atypical educational preparation. Three of these students were given probationary candidature. The remaining four were upgraded from masters to PhD candidature. Two students do not have an undergraduate degree. Only three students proceeded directly from undergraduate to PhD studies. One of these had worked for a couple of years between high school and university. This is presented in Table 1 below. It was not possible to provide more detailed information without risking the identification of individual student participants.

³ Where this has an impact on their PhD candidature, it will be presented in Chapter 5 in section 5.7. The consequences of the scholarship expiring for some of these students will be addressed there also.

Table 1 - Summary of the Educational Background of Student Participants

Academic Pathway	Number of Students	Probationary Candidature	No Undergraduate Degree	Directly from Undergraduate Studies
Typical	12	3		3
Atypical	5	3	1	
Masters Upgrade	4		1	

In addition five students have undergraduate degrees in disciplines different from the PhD discipline and two students have educational backgrounds that are in disciplines that are new to the academic environment.

The student sample represents a variety of age groups and has fairly even numbers of males and females. There are slightly more full-time than part-time students. Five of the student participants are either full- or part-time academic staff and three are international students with language difficulties to overcome and cultural adjustments to make.

At first glance this sample does not appear representative of PhD students who until recent years were generally thought to be young, having recently completed an honours program, studying full-time supported by a scholarship, and with few if any other responsibilities. However there is evidence that this stereotypical image has changed. Hockey (1994) after conducting in-depth interviews with 60 first year social science PhD students in the United Kingdom found "Many of the students interviewed were far from the mythical norm of young, recently graduated and single. They were often mature, married or in established relationships, with children, mortgages and the whole panoply of responsibilities which can come with advancing age" (p. 187). Likewise in Australia, Evans (1995) advised "In postgraduate research, supervisors may no longer find themselves supervising young students, who are fully committed to their research as they eke out their scholarships until graduation. It is more likely they will be dealing with students as old or older than themselves, who juggle work and family commitments alongside their research, and may well earn more money than their supervisors" (p. 23). Others have made similar assessments. Armstrong et al. (1997) described increased numbers of less homogenous students in recent years. Yeatman (1995) also talked about increased numbers of PhD students, and highlighted that many

of them were from “the wrong side of traditional academic tracks” (p. 9). Some students in this study fit that description.

Statistics 1997, published by Budget and Statistical Services at the university where data were collected for this study, revealed increased numbers of PhD students, with 47 percent female and 36 percent part-time. These percentages are not very different from those of the sample for this study. It is submitted that this PhD student sample, although small, is reasonably representative of PhD students as they currently exist.

4.3 The Supervisors’ Antecedent Conditions

Some antecedent conditions are likely to have an impact on the ability of a supervisor to provide supervision for PhD students. These include the availability of time to supervise and certain demographic variables.

4.3.1 Time for Supervision

Sixteen of the 18 supervisor participants acknowledged that time was allocated in some way to the supervision of research students. The most common method of doing this was for supervision to be part of their teaching load. One commented that it was something they did on top of their teaching load, but that almost everyone in the department participated, so the load was fairly even. Another said that there was no set formula, but supervision was acknowledged on the workload document. A third described ongoing debate as to whether it should be or not, and how much time should be allocated.

Three supervisors believed that the time allocation for supervision was nominal or notional and does not reflect the actual time needed and spent.

Not amount of time one puts into it, notional.

A nominal load attached to supervision and calculated by a certain formula. The time allocated for supervision of students does not reflect the actual load for it.

Supervision was seen as part of teaching load and in theory still is. In practice, I’m not sure.

For the remaining two supervisors one did not agree that there was any time allocation for supervision, and the other did not answer the question. This reflects supervisor perception rather than the policies and practices of the various departments.

4.3.2 Demographic Variables

Certain demographic variables such as gender, level of appointment and PhD supervision experience are thought to impact on the supervisory process.

4.3.2.1 Gender

Fourteen of the 18 supervisor participants are male. Only four are female.

4.3.2.2 Level of Appointment

At the commencement of data collection for this study the supervisors had the following appointments. Six were professors or heads of departments or directors of centres. There were also three associate professors, two readers, three senior lecturers, three lecturers and one research fellow.

4.3.2.3 PhD Supervision Experience

These supervisors brought a variety of supervision experiences with them to these PhD supervisions. Five had supervised more than four PhD students to successful completions. A further six had supervised between one and four PhD students to successful completion of their awards. The remaining seven were inexperienced PhD supervisors. They had not, at the commencement of this study, supervised a PhD student to completion of the PhD program. For one supervisor it was his first PhD supervision. Although inexperienced supervisors at PhD level, many of these supervisors had considerable experience supervising honours and masters students' theses.

4.3.3 Summary

Generally, the supervisor participants in this study were from the higher levels of academic appointment and a significant majority was male. They represent a variety of supervision experiences, but almost half were inexperienced PhD supervisors. Whether this supervisor sample is representative of PhD supervisors generally is difficult to ascertain. It does however represent a variety of academic appointments and supervisory experiences.

Nearly all supervisor participants acknowledged that time was allocated in some way for PhD supervision, although some commented that the time allocated did not reflect the actual time needed and spent on supervision. The fact that most supervisors were aware that time was allocated for PhD supervision is positive. Phillips and Pugh (1994) advocated teaching credit for doctoral supervision and argued that "Making resources available to ensure that supervision is an integral, and *recognized*, part of an academic's responsibilities would greatly improve the effectiveness of doctoral education" (p.177). Similarly, Holdaway (1996), after conducting interviews in three countries, noted the need to include graduate supervision as part of a faculty member's total workload.

Armstrong et al. (1997) indicated that staff resources had not changed proportionally with the increasing number of students in higher education. This may be one reason why some supervisors commented that the time allocated did not reflect the actual time needed and spent on supervision. Another reason may be the time-intensive nature of graduate supervision (Moses, 1992a).

4.4 Antecedent Conditions for Supervisors and Students

A number of antecedent conditions are relevant for both PhD supervisors and their students. These include their systems of belief about the purpose of the PhD and their respective levels of participation in the PhD supervisory process. Also the dyads they formed, the faculties in which the supervisors work and the students study and the context of this longitudinal study are important.

4.4.1 The Supervisor-Student Dyads

The 10 male and 11 female students plus the 14 male and four female supervisors formed 21 student-supervisor dyads. Three supervisors were supervising two students. This resulted in five female-female dyads, six female-male dyads and 10 male-male dyads.

4.4.2 The Faculties

The supervisor and student participants in this study are located in the departments and centres of five faculties in a large Australian university. Twelve students and 10 supervisors are in the Arts Faculty. Two of these supervisors are supervising two

students. Thus the 12 students and 10 supervisors form 12 dyads. The remaining nine students and eight supervisors are in the Science, Business, Computing and Engineering Faculties. As there are small numbers in each of these faculties, they will be grouped together and referred to as "other faculties". One of the supervisors in this group is supervising two students. Thus the nine students and the eight supervisors in the other faculties form nine dyads. Slightly more supervisor-student pairs or dyads are from the Arts Faculty than from the other faculties.

4.4.3 The Context

In 1987 the Australian Vice-Chancellors' Committee (AV-CC) published a booklet "Code of Practice for Maintaining and Monitoring Academic Quality and Standards" (AV-CC, 1990). Dramatic changes in the Australian higher education system and governmental policies that effected the research degrees of universities led to this code being revised and amended in 1990. "It was emphasised in that booklet that it was the responsibility of each institution to develop effective internal procedures for monitoring standards and quality, and suggested that the Code could be used as a guide to help universities formulate their own" (AV-CC, 1990, p.1).

The university, in which the supervisor and student participants worked and studied, published two such booklets that were relevant during the data collection period for this longitudinal study (1995-1998), the PhD and EdD Information Handbook (1991) and the Doctoral Information Handbook (1997). These two publications provided the university context in which the PhD supervision occurred. Both included a Code of Practice for the supervision of doctoral students, which detailed the responsibilities of the institution, department, supervisor and candidate.

In addition to this, the Green Paper (GP) or, more correctly, the government paper entitled "New Knowledge, New Opportunities: A Discussion Paper on Higher Education, Research and Research Training" was released in June 1999. Although this was after the data collection for this study was completed, some of the issues raised in this paper were a common concern earlier. Of particular mention are completion times and rates. Since 1995, the "research quantum" of the operating block grant to universities was partly based on publications of graduate students and graduate student completions.

In summary, supervisors and students in this study were governed by Codes of Practice published by the university. The general climate was one of financial incentives for decreasing the completion times and increasing the completion rates of PhD students.

4.4.4 The Purpose of the PhD

A variety of reasons were advanced for undertaking a PhD. These included making a contribution to knowledge, research training, broadening of life experiences, providing a “meal ticket”, and training for academia.

4.4.4.1 Making a Contribution to Knowledge and Research Training

The main purpose of the PhD was seen by both student and supervisor participants as some combination of research training and making a contribution to knowledge. Ten of the 21 students and 13 of the 18 supervisors said this was the main purpose. Student comments include:

In a general way, a combination of both. Not talking about myself, but for a person who's just come out of an honours degree, it's very much more training in research. Someone like me who's been working in science for years, it's more an original contribution.

Combination of both, but I tend to feel research training is an important part of it. I hope by doing the work that I will improve my own knowledge and training in research, reading and writing. I am interested in the product at the end, but the training aspects should be given more emphasis.

Two supervisors said that the greater emphasis should be on making an original contribution, whilst one felt that research training required the emphasis because of the three-year scholarship limit. He felt that it was difficult to contribute to knowledge within this period. Other supervisor comments are:

You receive training by doing some original research Students contribute to their own training, so does the general environment of the department, and the supervisor learns quite a lot from the student also.

Obviously I'm expecting them to learn and develop research skills. ... whatever their particular area. But what I can help them with most I suppose is a sort of general archival literature search and how to deal with that sort of material. ... I do expect them to learn how to deal with material, how to synthesise and paraphrase, and extract what they need. ... and also to learn skills along the way like how to deliver a paper, or keep a bibliography up to date, how to get onto a conference network, and how to get a CV up and running and that sort of thing. ... yes there are particular skills I can see as getting more confident verbally and

with ideas. ... being a contribution to knowledge, I know that's the rubric of PhD. ... sometimes that's hard to define what it is specially. There's so much time spent thinking about well what is your area of interest, and then what is your topic and then you go off and think about it and then the reading of other things formulates something of your own. ... I think that's always an interactive process. I mean I don't know that anybody ever comes up with the kind of pure and original, you know, gem that no-one has ever thought before, but you know, something that has their own particular spin on it I guess. Or take something or takes an idea, set of ideas, and applies them differently.

Both research training and a contribution to knowledge. Unfortunately the PhD is often the only evidence of one's ability because people are hired for teaching, and it doesn't tell anything about teaching. But given that restriction, it does say that the student can do a substantial piece of research. And I think that piece of research should be substantial enough to contribute to knowledge. And, in general they do. And I think it's very unfortunate if one doesn't, and one would be doubtful about that as a PhD level work.

Some combination of research training plus an original contribution to knowledge. I think they need to demonstrate that they have mastered the necessary skills, and they can conduct research by themselves, and they should exhibit some original contribution to knowledge. But the primary purpose of a PhD is to teach students how to undertake research and write about their research, how to design new research programs.

First of all I think the PhD is a set of training wheels ... to allow the student to learn how to do independent research, and how to report it, without the pressures of actually having to do it for a living. ... You certainly can do original work, and certainly you can't get a PhD without doing it. ... the research training, not less important, but less obvious.

One supervisor highlighted that an original contribution to knowledge is very difficult to define, and varies with each project.

The element of original contribution to knowledge is very difficult to define, and it varies from project to project. In many cases it will consist wholly of an original re-interpretation of materials already in existence, a new arrangement, rather than a new piece of knowledge.

Three supervisors commented that the scope for originality is decreasing. Four students who commented that it was very difficult to contribute to knowledge supported this comment. Examples of their thoughts follow.

Nowadays the field is so broad, and so well established that doing original work means doing very focused narrow work. Twenty, thirty years ago this was not the case.

Supposed to contribute to body of knowledge. Some PhD's do that but they're few and far between because it is the individual's first exposure to any kind of research in a major way.

4.4.4.2 Original Contribution to Knowledge

Despite the reservations of the above participants, seven students and one supervisor saw the purpose of the PhD as specifically an original contribution to knowledge. These students tended to think research training occurred at either honours or masters rather than at PhD level. Accordingly, they saw the purpose of the PhD solely as an original contribution to knowledge. Some comments from students are:

Key opportunity for me to invest thought in an area and to come up with something that will add to knowledge or will be some sort of contribution in the field that I'm looking at rather than the actual research skills or that sort of learning.

Must make an original contribution to knowledge, that's the difference between masters and PhD. Need to do original research and present a new philosophical argument that is of some substance, and of some greater scope and use than to your immediate piece of work.

4.4.4.3 Research Training

Four students and three supervisors saw the purpose of the PhD as research training only. One supervisor, who is an experienced PhD supervisor, said:

Another qualification. Not the major work, you know, or the ultimately original contribution to science or literature or whatever else. Research training with reasonable output which demonstrates that a person has got that training and can actually do whatever that training Can't make a contribution to knowledge in three years.

4.4.4.4 Broadening of Life Experiences

A number of supervisors described the broadening of life, intellectual and cultural experiences of PhD students among its purposes. Their comments include the following.

I also see it as an important step in moving towards independence, and not just in terms of their particular area of research, but independence as a person, as an adult.

There is a certain broadening of the life experience and intellectual experience generally that the PhD experience can contribute.

Hopefully sometime he will do something else other than his project, so that he improves himself. ...his pronunciation and command of the English language is not very good. ... Also needs to gain an appreciation of the Australian culture. It's a pity if someone from overseas only ends up with a piece of paper after three to four years.

It is not research training that is important, it is education. Education in life.

4.4.4.5 Providing a “Meal Ticket”

One supervisor says to students who drag on their candidature trying to write the perfect PhD:

It's a meal ticket, finish it. It's not the last thing you will write. Don't finish it and you'll never go on to make those contributions. ... I think students get overawed by PhDs. And they get; they look at me in horror when I say it's a meal ticket. Get it.

This supervisor went on to say the PhD is a meal ticket in two ways. First, in the traditional sense, it is a pathway to academia. However, given that pathway is somewhat constricted nowadays, it is still a meal ticket somewhere. Students learn a lot in content and research technique and application. They get a lot out of the PhD, but they only get it if they finish it. He believes that the only outcome for students who fail to complete their PhDs is an unhappy experience.

Another supervisor expressed similar thoughts and feelings. He likes students to:

work hard and be very focused, and get their PhDs out of the way. I think for a PhD you have to be fairly objective, and it becomes an obsession to get it out of the way. Because really it's a stepping stone to other things.

These views were in stark contrast to those of another supervisor who said that he doubted whether it is important for students to obtain their PhDs in the end. He has a friend who has a master's degree and started a PhD but did not finish. He has a nice job. This supervisor says his friend can not be called a failure because he knows what he wants in life, and that possibly the time he spent studying for his PhD enriched him. “And that piece of paper, who cares after another five years?”

4.4.4.6 Training for Academia

Several supervisors described one of the purposes of the PhD as an introduction to, and training for academia. Likewise some students saw the PhD as a stepping stone to academia, saying that they needed a PhD to get a job. One supervisor described this as follows.

I think it's also an introduction into academia in its more general sense, in that we expect that our postgraduates will also be doing some kind of teaching, probably as demonstrators in a practical class. ... and we expect them to take part in the various activities of the department,

coming to seminars, presenting seminars, writing papers, presenting those papers, coming to morning tea. So in a sense it's more into that entire environment.

Two supervisors stressed the importance of asking students what they want to get out of a PhD before they enrol. One of these supervisors might spend up to two hours in such discussions. He gives prospective students a picture of what he sees as the process a PhD student will go through. He describes "the ups and downs, it is a very sometimes isolated experience. And they have to know it before they start". If students are looking for financial reward, he discourages them. If they think more doors will open for them, he tells them it may or may not be true. Sometimes more doors might be closed than opened. This supervisor says some students just disappear once they find out what is required to obtain a PhD. The other supervisor is concerned that academic careers are no longer freely available. He thinks it is morally wrong to encourage students to undertake a PhD if they think it will get them an academic career other than intermittent and under-paid employment. They would be better off doing something else. He asks students: why are you doing this? He highlights that a PhD is a big commitment and sees part of the supervision process as making sure that PhD students are keeping their options open.

One student participant who already had an academic position said she needed a PhD to keep her job. Two others, also academics said they needed the skills they were learning during the PhD process for their work, one of these referring specifically to supervision skills.

In summary, about half the student and most of the supervisor participants saw the purpose of the PhD as some combination of research training and contributing to knowledge. Some participants highlighted that it is difficult to contribute to knowledge because it is a student's first major piece of research and the three-year timeframe is restrictive. Some saw the purpose as either contributing to knowledge or research training. Interestingly significantly more students than supervisors saw the purpose as an original contribution to knowledge only; supervisors were more likely to see it as both research training and an original contribution to knowledge. Other purposes included education for life and preparation for an academic career.

4.4.5 Expectations regarding the Supervisory Relationship and Process

Supervisors and students had a variety of expectations regarding the supervisory relationship and process as evidenced by their responses to the Role Perception Rating Scale (Appendix 5). Prospective participants were sent the Role Perception Rating Scale (RPRS), developed by Moses (1981a), with their invitation to participate in the study. Participants accepting the offer returned the completed RPRS forms with their signed Consent Forms.

The RPRS consists of 11 questions located in three sections: topic or course of study; contact and involvement; and the thesis. Each question consists of two contradictory statements. Responses could be made at either end of a five-point scale indicating support for one or the other statement. Alternatively a middle response (3) indicates the middle ground, that is, a neutral or undecided position. One participant wrote on the RPRS that this was the “negotiate” position. Other participants suggested that some of their responses would be different depending on the stage of the PhD.

4.4.5.1 Topic or Course of Study

The first section on the RPRS consists of three questions (1-3) that provide for responses to statements relating to the topic or course of study. The statements and results for question one are presented in Figure 1.

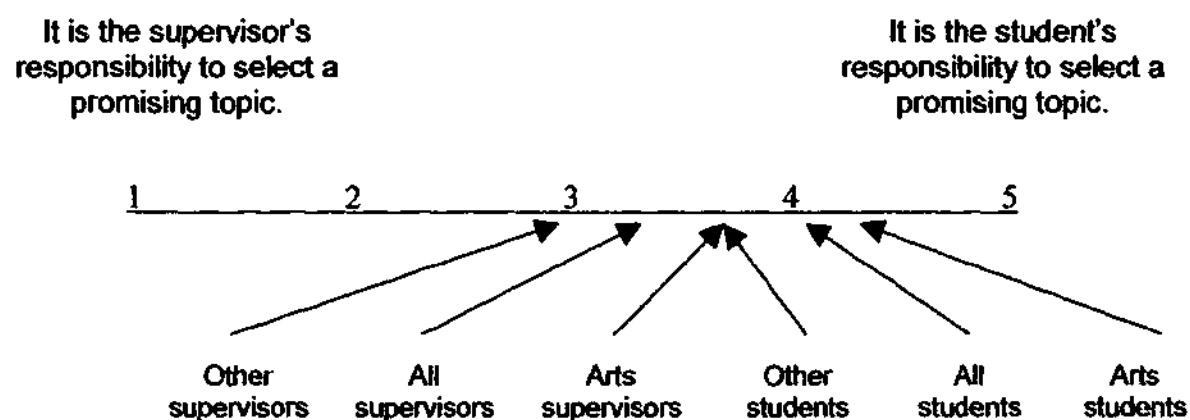


Figure 1 - Whose Responsibility is it to select a Promising Topic?

A one response to this question gives the responsibility to the supervisor; a five response gives the responsibility to the student. For all supervisors in this study the mean was 3.4. Supervisors to some extent saw the selection of a promising topic as a shared responsibility. There were differences in the responses to this question for the

supervisors in the Arts Faculty (mean 3.7) compared to the supervisors in the other faculties (mean 3.0). This indicates Arts Faculty supervisors saw the choice of topic as slightly more students' responsibility than the supervisors in the other faculties did. Students generally saw the choice of topic as their responsibility with a mean of 4.0. Students from the Arts Faculty had a mean of 4.3 compared with students from the other faculties who had a mean of 3.7. In general, supervisors saw the responsibility of selecting a promising topic as a shared responsibility, students saw it as more their responsibility. Both the students and supervisors from the Arts Faculty were more likely to see it as a student responsibility than the students and supervisors from the other faculties.

The statements and results for question two are presented in Figure 2.

In the end, it is up to the supervisor to decide which theoretical frame of reference is most appropriate.

Students have a right to choose their own theoretical standpoint even if it conflicts with the supervisor's.

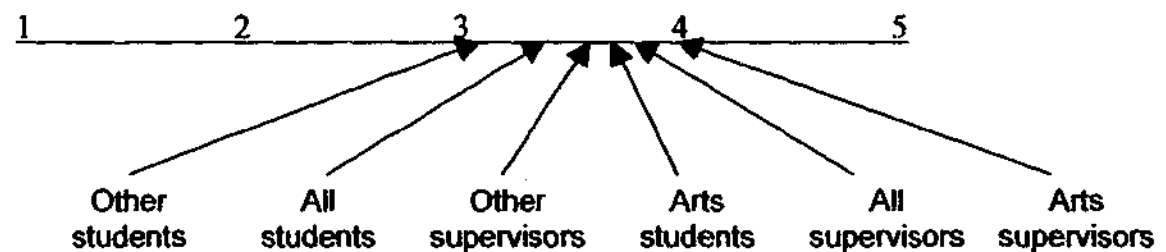


Figure 2 - Who Chooses the Theoretical Frame of Reference?

A one response to this statement gave the right to the supervisor; a five response gave it to the student. The supervisors saw it as a shared responsibility with a student emphasis having a mean of 3.8. Again supervisors from the Arts Faculty put the right more with the students (mean 4.0) than supervisors from the other faculties (mean 3.6). Students also regarded it as a shared responsibility with a student emphasis. Their mean was 3.4. There were divisions between the Arts Faculty students (mean 3.7) and the other faculties' students (mean 3.1) for this question.

Question three has the statements and results that are presented in Figure 3.

The supervisor should direct the student in the development of an appropriate programme of research and study.

The supervisor should act mainly as a sounding board for the student's ideas and give advice.

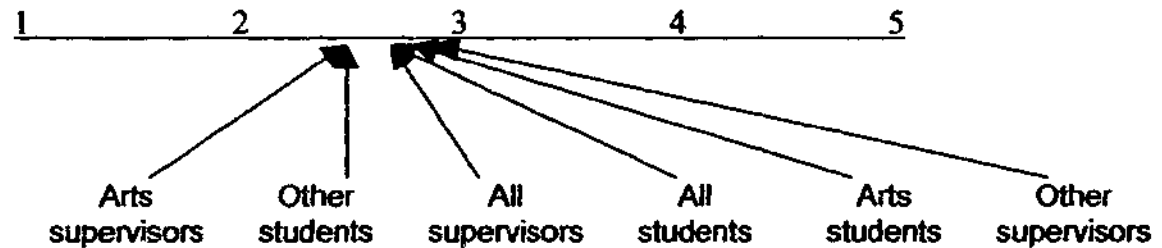


Figure 3 - Should the Supervisor be a "Research Director" or a "Sounding Board"?

A one response indicates the supervisor should direct the research, a five-response the supervisor should act as a sounding board. Supervisors saw this as interactive or negotiated with a mean of 2.7. There were slight differences between supervisors from the Arts Faculty (mean 2.5) and supervisors from the other faculties (mean 2.9). Students had the same mean as supervisors' (2.7). There were slight differences between Arts Faculty students (mean 2.8) and other faculty students (mean 2.5). It appears that all groups are fairly homogenous seeing it as negotiated and with a slight leaning towards supervisor direction.

Regarding the responsibility to select a promising research topic, supervisors in this study saw it as a shared responsibility with students. The students in the study were more likely to see it as their responsibility. Some differences were evident between the supervisors and students from the Arts Faculty and the other faculties. Both the students and supervisors from the Arts Faculty were more likely to see it as a student responsibility than the students and supervisors from the other faculties. Regarding the selection of a theoretical framework, supervisors and students saw this as negotiated with a leaning towards students' choice. Slight differences were apparent between the students and supervisors from the Arts Faculty and the other faculties, particularly for the students. Both students and supervisors selected a middle of the road approach with a slight leaning towards supervisor direction regarding the supervisor being directive or acting as a sounding board regarding the student's research program. Moses (1981a)

found that most students indicated that it was their responsibility to select a topic and theoretical framework.

4.4.5.2 Contact and Involvement

The second section on the RPRS consists of four questions (4-7) that provide for responses on statements relating to the intensity of the student-supervisor relationship. The statements and results for question four are presented in Figure 4.

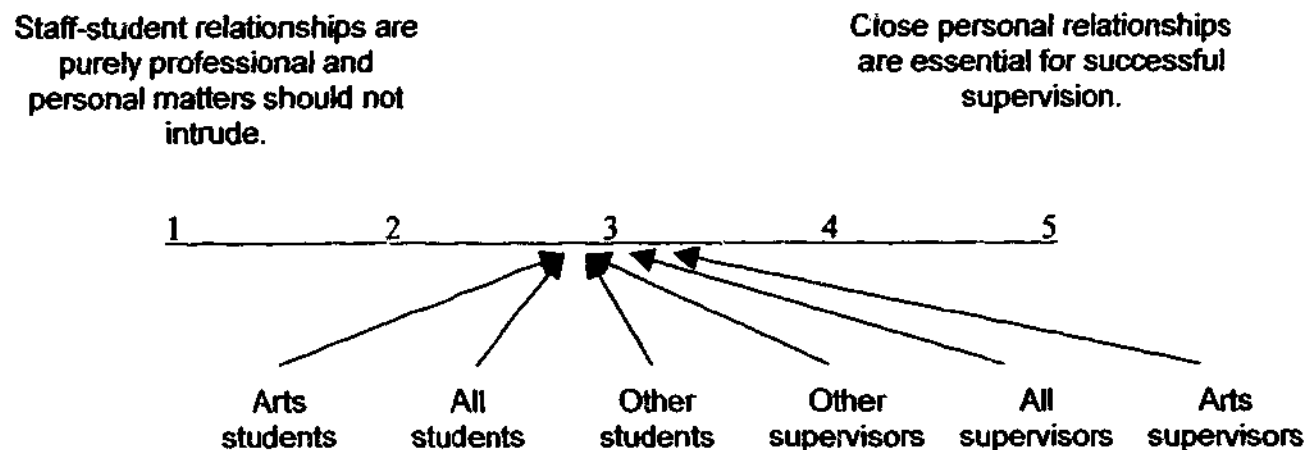


Figure 4 - Professional versus Personal Supervisory Relationships?

A one response to this question signifies a preference for professional relationships, a five response a preference for personal relationships. Supervisors and students indicated a preference for middle of the road relationships, neither purely professional nor highly personal. The mean for supervisors was 3.1 and for students 2.8 indicating supervisors overall were willing to be slightly more personal than the students. Supervisors in the Arts Faculty had a mean of 3.3, for supervisors in the other faculties the mean was 2.9. Students in the Arts Faculty had a mean of 2.8; students in the other faculties had a mean of 2.9. It appears that supervisors were slightly more willing to consider a close personal relationship to be an appropriate component of supervision than students were.

Question five provides the statements and results that are presented in Figure 5.

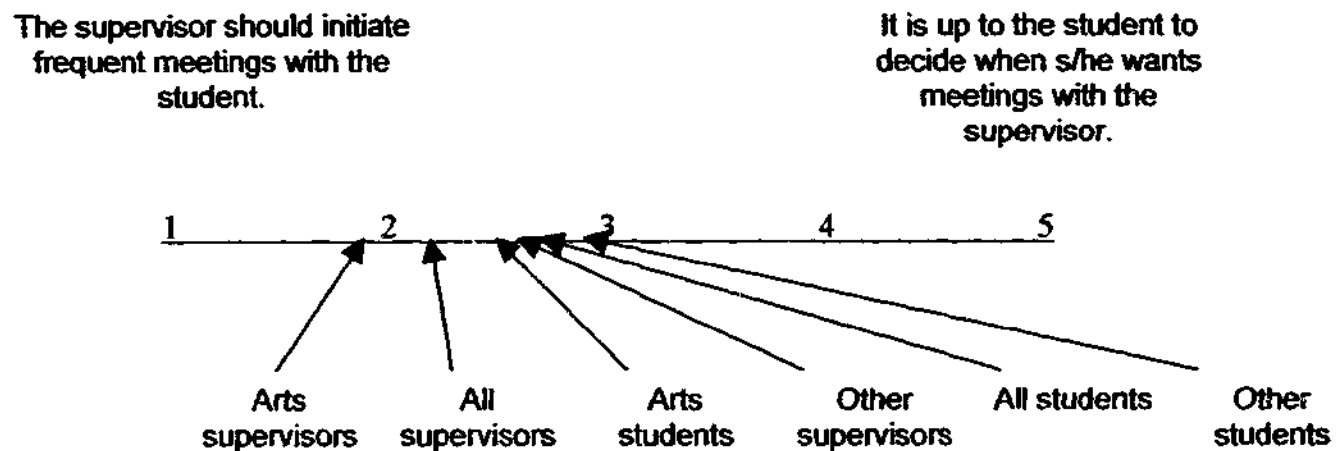


Figure 5 - Who should initiate Supervisory Meetings?

A one response represents supervisor-initiated meetings; a five response is for student initiated meetings. The mean for the supervisors was 2.2. Divisions occurred between supervisors from the Arts Faculty (mean 1.9) and the supervisors from the other faculties (mean 2.6). Students had a mean of 2.7. Differences between faculties were slightly less apparent for the students than the supervisors. Students in the Arts Faculty had a mean of 2.5. Students from the other faculties had a mean of 2.9. It appears that generally the initiation of meetings is a responsibility shared between students and supervisors, with both groups giving supervisors slightly more responsibility. Arts Faculty supervisors in particular said that they should initiate meetings.

The statements and results for question six are presented in Figure 6.

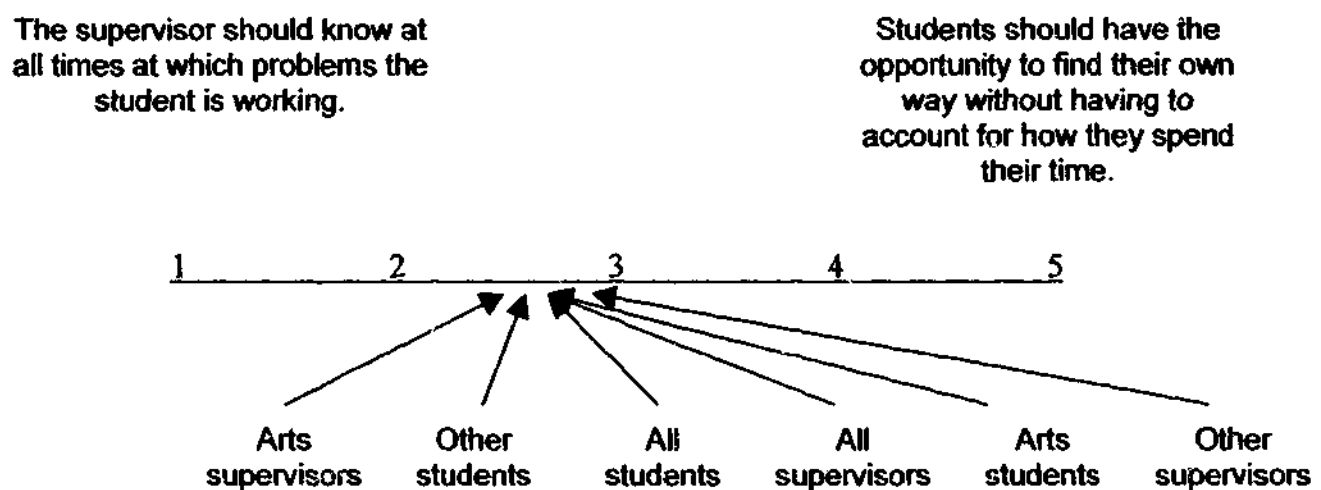


Figure 6 - How Close should the Supervision be?

A one response indicates that the supervisor should know what the student is doing, a five response gives the student academic freedom. The supervisor and student

participants in this study had the same mean (2.7). There was a slight difference with the means of the supervisors from the Arts Faculty (2.5) and the other faculties' (2.9). For students from the Arts Faculty the mean was 2.7, whilst it was 2.6 for students from the other faculties. Generally students and supervisors took a middle of the road approach with a tendency towards the supervisor knowing what the student was working on.

Question seven proposes the statements and has the results that are presented in Figure 7.

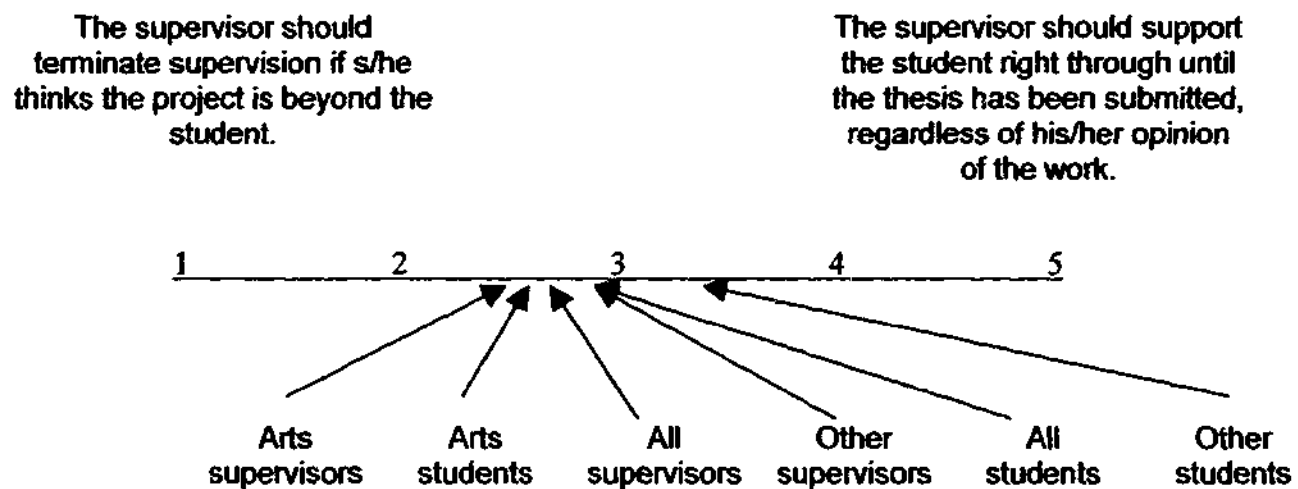


Figure 7 - Should the Supervisor provide Unconditional Support?

A one response here supports termination of the supervision if the supervisor thinks the project is beyond the student and a five response unconditional support. The mean for supervisors was 2.7. This indicates a slight leaning by supervisors towards the termination of supervision if the supervisor thinks the project is beyond the student. There were not big differences between supervisors from the Arts Faculty (mean 2.5) and supervisors from the other faculties (mean 2.9). Students were nearer the middle ground with a mean of 2.9. Students in the Arts Faculty had a mean of 2.6. The mean for the students from the other faculties was 3.4. Of all the participants, the students from the other faculties expected a degree of unconditional support for their work from supervisors.

Generally both the supervisors and students in this study preferred a "middle of the road" type relationship that was neither purely professional nor closely personal. The initiation of meetings was seen as a mutual responsibility, with slightly more

responsibility resting with supervisors. This was particularly so for the supervisors from the Arts Faculty. Moses (1981a) found that students indicated it was their responsibility to decide when to have supervisory meetings. In relation to the supervisor knowing at all times what the student was working on compared to academic freedom for the student, most students and supervisors sought a compromise situation, with a slight leaning toward the supervisor knowing. Arts Faculty supervisors in particular wanted to know what the students were working on. There was a slight preference by supervisors towards supervisors terminating the supervision if they thought the project was beyond the student. Students chose a more negotiated outcome, particularly the students from the other faculties. They wanted varying degrees of supervisor support regardless of the supervisor's opinion of the student's work.

4.4.5.3 The Thesis

The third section on the RPRS consists of four questions (8-11) that provide for responses to statements about the thesis. The statements for question eight relate to time-lines and are presented along with the results in Figure 8.

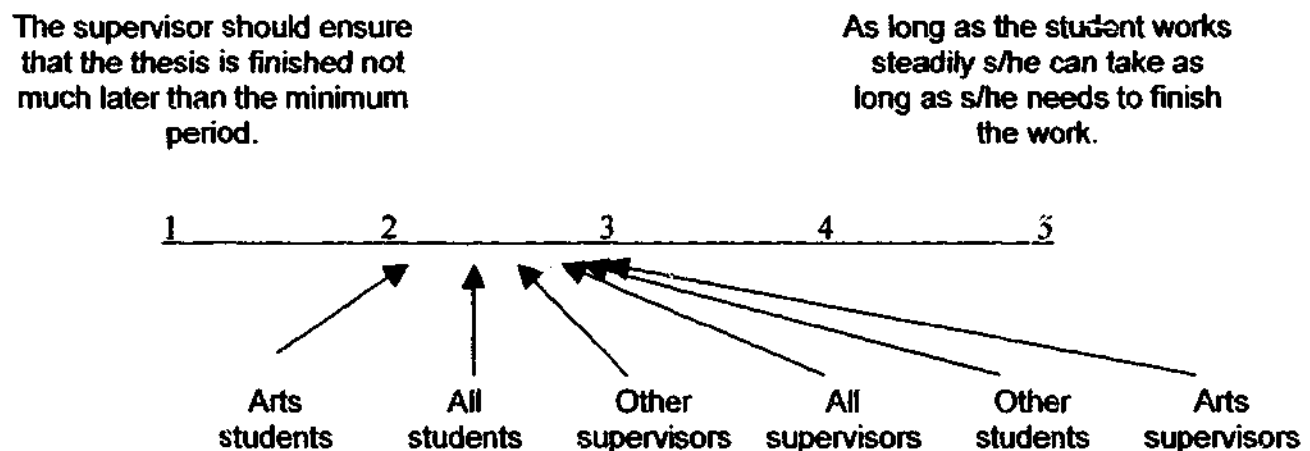


Figure 8 - Who Decides the Pace of Thesis Work?

A one response indicates early completion and places some responsibility on the supervisor for this. A five response permits the student to work steadily and take the time needed to complete the thesis. The mean for the supervisors was 2.8. Supervisors from the other faculties were slightly more concerned that the students complete not much later than the minimum period (mean 2.6) than supervisors in the Arts Faculty (mean 3.0). The mean for the students was 2.4. Arts Faculty students were more inclined to want supervisors to encourage completion (mean 2.1) than students from the other faculties (mean 2.5).

Question nine proposes statements about the standard of the thesis. The statements and results are presented in Figure 9.

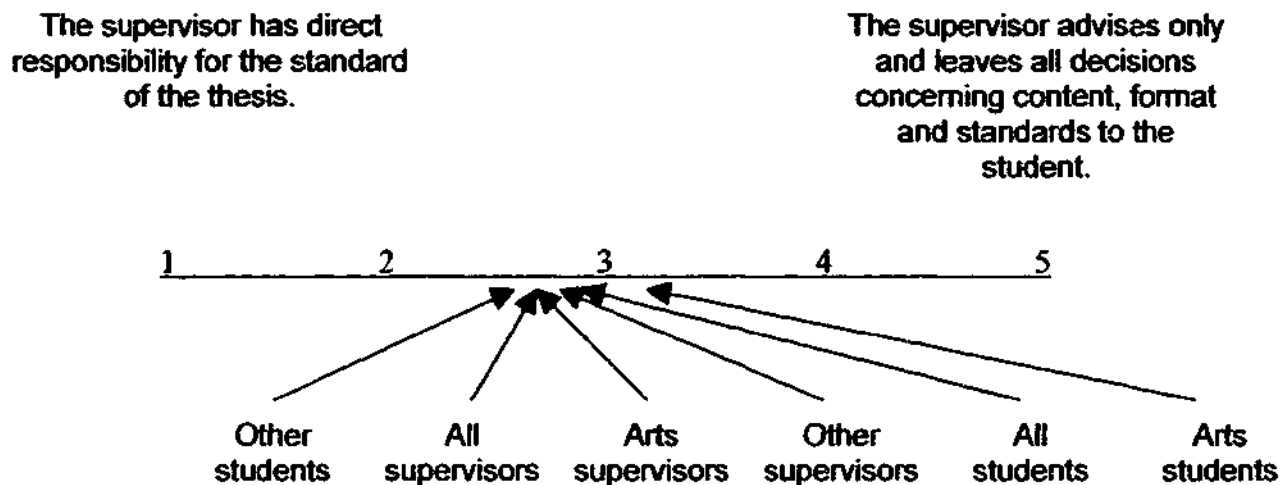


Figure 9 - Whose Responsibility is the Standard of the Thesis?

A one response gave the supervisor the responsibility for the standard of the thesis; a five response gave the responsibility to the student. Students and supervisors generally viewed this as a shared responsibility. The mean for supervisors was 2.7, for students the mean was 2.8. The mean for supervisors in the Arts Faculty and the other faculties was 2.7. The mean for students in the Arts Faculty was 3.1 compared to 2.6 for students in the other faculties, thus indicating that students in the other faculties did attribute slightly more responsibility for the standard of the thesis to their supervisors.

Question 10 looks at who is responsible for initiating the provision of feedback regarding drafts of the thesis. The statements and results are presented in Figure 10.

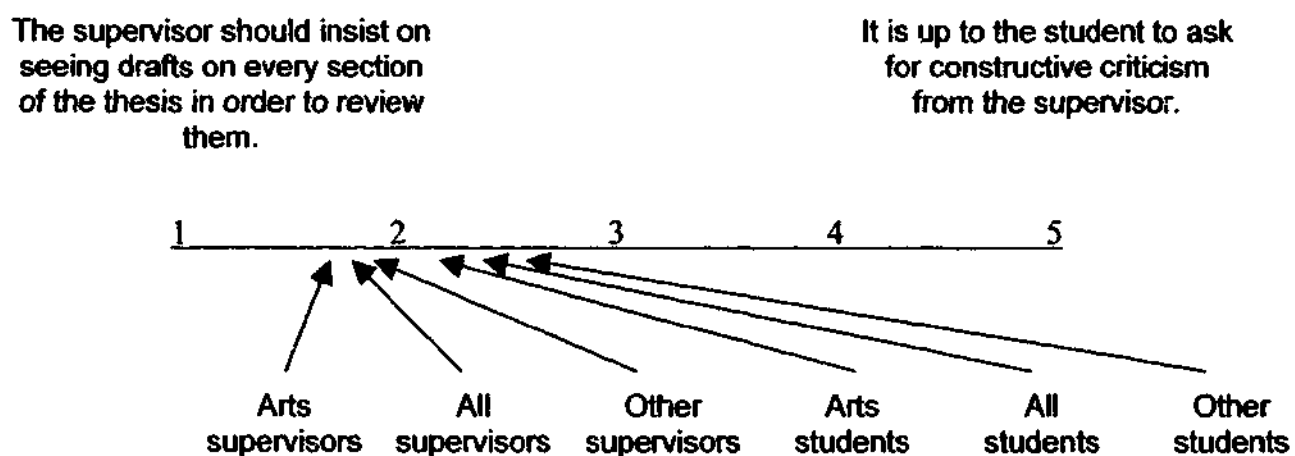


Figure 10 - Who is Responsible for initiating Feedback regarding Thesis Drafts?

A one response puts the responsibility with the supervisor, a five response with the student. Both students and supervisors gave the supervisor more responsibility for

initiating the reviewing of drafts, the supervisors more than the students did. The mean for supervisors was 1.8. The mean for students was 2.2. There was some slight variation for different faculties. The mean for supervisors from the Arts Faculty was 1.7 compared to 1.9 for supervisors from the other faculties. Students from the Arts Faculty had a mean of 2.1; the mean for students from the other faculties was 2.3. It appears that supervisors and students from the Arts Faculty place the responsibility for initiating the reviewing of drafts more firmly with the supervisor than the supervisors and students from the other faculties.

Question 11 presents statements and results relating to who should write the thesis. These are presented in Figure 11.

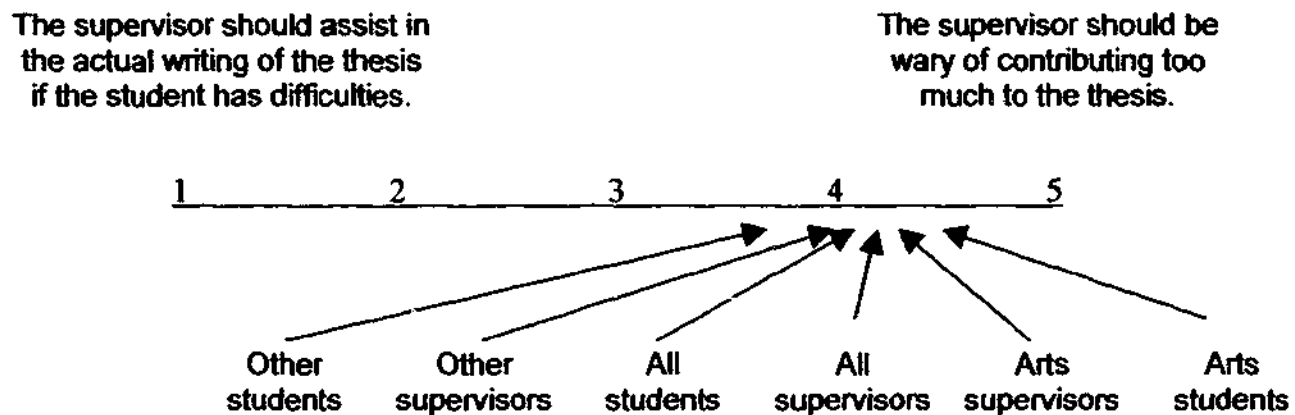


Figure 11 – How much Assistance should the Supervisor provide in Writing the Thesis?

Supervisor responsibility to assist with writing is indicated by a one response, student responsibility for writing the thesis is indicated by a five response. There was an overwhelming response from both supervisors and students indicating that the supervisor should be wary of contributing too much to the writing of the thesis. The mean for supervisors was 4.2 and 4.1 for students. The mean was 4.3 for Arts Faculty supervisors and 4.0 for supervisors from the other faculties. Students from the Arts Faculty had a mean of 4.4; students from the other faculties had a mean of 3.7. Students from the other faculties appear more willing to consider some supervisor assistance with writing the thesis.

Three supervisors and three students believed that the supervisor should assist with the writing of the thesis. They all gave 2 as their response to the above statements. One of the supervisors was from the Arts Faculty; the other two were from the other faculties.

Likewise for the students, one was from the Arts Faculty and two from the other faculties. Two of the students were from other countries and have non-English speaking backgrounds. The third student was from a discipline that has not traditionally been part of the academic environment.

Supervisors and students preferred a balance between the supervisor ensuring a timely completion of the thesis and the student being permitted to work at a steady pace. Arts Faculty students were more inclined to encourage supervisor intervention regarding this than students from the other faculties. Supervisors and students generally agreed that they share responsibility for the standard of the thesis. Both supervisors and students saw the responsibility for initiating the reviewing of drafts as more of a supervisor than student responsibility. However in relation to the actual writing of the thesis, this was seen very much as a student responsibility by both supervisors and students.

Moses (1981a) found that students indicated it was their responsibility to plan their time and decide how long to take, to decide on the content, format and standard of the thesis, and, most definitely, to write the thesis. Moses generally found students self-directed. However, she indicated that there was a wide diversity of opinion concerning the responsibility for standards and completion of the thesis.

This sample of supervisors and students is small and the findings in relation to the RPRS are not intended for generalisation beyond the sample. They are presented as antecedent beliefs and expectations about the nature of the supervisory relationship and process for this group of supervisors and students. It is worth pointing out that although the beliefs have been presented in relation to groups, differences between some individuals in each group are stark⁴.

4.4.6 Summary

Twenty-one student-supervisor dyads from five faculties in a large Australian university formed the sample for this study. The general climate was one of financial incentives for decreasing the completion times and increasing the completion rates of PhD

⁴ This matter will be brought up in Chapter 6, Outcomes.

students. Most supervisors and half the students saw the purpose of the PhD as some combination of research training and making an original contribution to knowledge. Supervisors and students had varied expectations regarding the supervisory relationship and process as evidenced by their responses to the RPRS. These expectations and beliefs were presented in relation to groups.

4.5 Chapter Summary

This chapter has presented the antecedent conditions, that is, the relevant conditions that existed prior to the supervision for the students and supervisors participating in this longitudinal study. Antecedent conditions specific to the students, specific to the supervisors and common to both groups have been presented, described and discussed.

Twenty-one students from a variety of educational backgrounds formed the PhD student sample for this study. They were varied ages and there were almost equal numbers of men and women. Slightly more were enrolled full-time than part-time. It has been submitted that this student sample, although small, is reasonably representative of PhD students generally in recent years.

Eighteen supervisors formed the PhD supervisor sample for this study. These supervisors represented a range of levels of academic appointment, but were predominantly from the higher levels of appointment. They were also predominantly male. They had contrasting PhD supervision experience, but almost half were inexperienced. Time was allocated by various means for supervision. Some supervisors thought that the time allocation was inadequate.

These 21 PhD student-supervisor dyads were located in five faculties in a large Australian university. Twelve dyads were from the Arts Faculty. The remaining four faculties were grouped together and designated as “other faculties”; there were nine dyads from the other faculties. The context of this study was one of increasing government and university emphasis on decreasing completion times and increasing completion rates. Most of the supervisors and about half of the students had the view that the purpose of a PhD was some combination of research training and making an original contribution to knowledge. A significant number of students viewed the

purpose solely as making an original contribution to knowledge. Supervisors and students expectations of the nature of the supervisory relationship and process were measured using the RPRS (Moses, 1981a). These expectations were presented as group data. It is expected that individual differences between supervisor and student will be more important to the actual supervisory relationship and process for the dyads in this study.

The next chapter, Chapter 5 Supervisory Transactions will present and describe the transactions that occurred during the supervisory relationship and process. Then Chapter 6 Outcomes will describe and analyse the outcomes of the supervisory relationship and process.

Chapter 5 – Supervisory Transactions

5.1 Introduction

It will be recalled that Chapter 3, Methodology, introduced Stake's (1967) framework for the organisation and presentation of the results for this longitudinal study. This framework incorporates three component parts: antecedents, transactions and outcomes. Each of these component parts forms a chapter that contains the findings from this study. The previous chapter, Chapter 4 Antecedent Conditions, presented and described the antecedent conditions that the supervisors and students in this study brought to the PhD supervisory process. This chapter, Supervisory Transactions, will present and describe the transactions that occurred during the supervisory relationship and process. The next chapter, Chapter 6 Outcomes, will present and describe the outcomes of the supervisory relationship and process. The outcomes will be analysed in relation to the antecedent conditions and supervisory transactions. Chapter 7 will provide a summary, along with conclusions and recommendations.

Because both students and their supervisors participated in the study, transactions will be viewed from both perspectives. Stake (1967) describes transactions as "the countless encounters of students with teacher, student with student, author with reader, parent with counselor – the succession of engagements which comprise the process of education" (p. 528). For the purpose of this study the "encounters" will be between students and supervisors and the "succession of engagements" the supervisory process. Stake views transactions as dynamic compared with antecedents and outcomes, which are relatively static.

The transactions occurring between students and their supervisors during the PhD supervisory process that were explored in this longitudinal study were found on careful analysis to fit within a number of inter-related themes:

1. The picture of supervision and choice of a suitable topic;
2. The relationships between students and supervisors;

3. Power as a dimension of the supervisory relationship;
4. The supervisor's supervisory style;
5. The development of student autonomy;
6. Continuity of supervision; and
7. The match between student and supervisor.

Each of these inter-related themes forms a section within this chapter. The transactions relating to these themes will be presented, described, and, when appropriate, analysed and discussed. The complexity and importance of, and some of the difficulties associated with, these transactions are highlighted by a number of supervisors.

What an immensely complex and complicated process it is. ... just when you think you're dealing with the ideas on a page. ... of course you're dealing with more than that. I don't pretend we're not people in a room with interaction and an ongoing relationship of sorts. But I suppose ... it's very challenging I think the kind of baggages that can get attached to that relationship. ... What is reasonable to give as a supervisor?

To me it is almost like, I would like to use a very old concept, it is between a master and an apprentice. It is that kind of relationship, that kind of intimacy, between a supervisor and a student. Now, it's not unusual, I have students who might be slightly older than me, or about my same age, and who might in fact have quite a wide variety of experience, even in quite a few aspects, even better than me. Now, if under those circumstances, the type of a master/apprentice relationship might not be even well defined in the sense that I might not all the time be the master. And depending on the student's background, the student's attitude, the way of supervision ... do it different from one student, to another student, and to the next. ... The way I look at it is more than just the project itself. ... When you are looking at supervision, it is the person that counts and not the project. And it is the process and not the outcome. ... I do not believe anyone can do good research unless they feel secure, have a sense of belonging, have no other issue that trouble him or her. Because if they aren't even fit themselves, forget about research. If they have emotional problems, which they cannot resolve or cannot suppress, forget about research. So I see the role of supervisor ... traditional master role, not only that they have to teach them, the apprentice, the trade, but also to provide a kind of security. ... The next step is you have to gain their trust and confidence because they will then feel free to talk to you. They will not then object to you criticising them in a much more open and direct manner. Because they know that it is just part of the process. And hopefully they get some enjoyment out of it.

Get your good ones and it's great fun, ... but get the unsuited ones, ... it's an emotional worry ... because you're always saying well look have I got to do it for them, and I draw the line on that.

Two supervisors described supervision as a leap of faith in their assessment of another human being. Their comments follow.

And he'll tell me that that's the way he works, he's aware of that, and that will be brought into line. I'm reasonably satisfied that that is the case, although as time goes I keep thinking, well you know?

There's really no way of ever knowing whether someone's going to succeed or not.

One student articulated the importance of his supervisor having faith in his work.

He really had to take it on faith that over the course of time I would work out what was the point of what I was doing. And in some sense that was faith for me too.

These comments relate to the supervisory process as a whole. Some might say that this process should not be reduced to component parts. But this researcher believes that only by considering component parts can the intricacies of the supervisory relationship be revealed.

5.2 The Picture of Supervision and Choice of a Suitable Topic

5.2.1 Assigning Supervisors to Students

The assigning of supervisors to PhD students is an important early transaction. Supervisors' and students' views on the process will be presented separately. This will be followed by a description of the supervision arrangements for the 21 student participants in this study.

5.2.1.1 Supervisors' Views

In most cases the processes for assigning supervisors to PhD students were informal. Only one supervisor reported a formal process. He described a situation where the prospective student and supervisor were required to meet with the Director of Graduate Studies to see what both parties expect from the supervisory relationship. Interpersonal and academic expectations were discussed. A series of questions was posed and both student and supervisor answered them. The supervisor then left and discussion continued between the student and Director of Graduate Studies.

Most supervisors outlined informal processes where students enrol and then talk with people working in their area of interest, or their applications are passed to potential supervisors who interview the applicants if they are interested in taking on the supervision. It was highlighted that face-to-face discussions between prospective supervisors and students can be difficult when the applicant is an international student. Four supervisors commented that often the supervisor knows the student from undergraduate studies and the student approaches the supervisor. Two supervisors said that the processes in their departments were ad hoc; another two said the processes varied from supervisor to supervisor. One supervisor said that each academic gives a talk at the end of the year about their projects; another said that if the supervisor raised the funds for a scholarship this was advertised; whilst another commented that it was usually the topic that drags them (students) in.

Two experienced supervisors encourage students to go to a number of people and talk with them about possible topics and supervision. They view this matching process as essential. One of these supervisors said:

They should shop around at the beginning and perhaps shop around in a number of departments and a number of universities to make sure they're going to get the best supervision for themselves. ... It's absolutely crucial to the success of the thesis.

The other of these two supervisors highlighted the importance of both supervisors and students being able to make choices. She went on to say:

Doesn't always happen and not happening efficiently at the moment. ... Difficult with the situation of constantly dwindling finances and heavier workloads. ... Students always want some people rather than others.

Four supervisors stressed that supervision choices can only be made for academic (research topic) reasons, particularly in a small department. Two of these supervisors added that it takes time to see how a student and supervisor are going to get on.

The only matching is on the intellectual or the research topic, rather than on personality, or culture or what have you. In a sense that it is a bit difficult to do, that kind of matching. How do you know what sort of person he is before his arrival? Even after his arrival he will take some time to develop. So that human aspect is being ignored. And you just match on the student's interests and his background in a particular discipline. That is being done to a large extent.

One supervisor commented that if she was unsure about supervising a particular student after interviewing the student, she asked that they write a 5,000 word essay:

It usually gets rid of them. But you might be surprised. If you get something really good, then you have good grounds for accepting the student.

Two issues arose from the above discussion. First, whether the supervisor could say no to supervising a particular student and, secondly, recourse in cases of mismatches. Seven supervisors stressed the importance of being able to say “no” to supervising a particular student. Concerns expressed generally related to the field or topic of study, the ability of the student, and potential “personality clashes”. One supervisor was concerned that academic careers are no longer freely available, and (as mentioned in 4.4.4.6) he thinks it is morally wrong to encourage students to do a PhD if they think it will get them an academic career other than intermittent and under-paid employment. Specific comments from some of these supervisors follow.

If you can't get on with the student ... then they're going to lose, as are you. You've got to address that issue right at the outset.

So one of the first pieces of advice I always am prepared to give a new supervisor is don't touch anything you don't feel confident about supervising.

Most supervisors felt that they could say no to the supervision of a particular student, although four highlighted the difficulties of doing this in a small department that had decided to support the student. Two supervisors said that it would be necessary to provide reasons for saying no. Two supervisors were unsure whether they would be able to say no, and one acknowledged that it may be difficult for other supervisors in his department to say no.

Several supervisors described feeling pressured to take local and international PhD students because their departments wanted the funding for these students. Their main concerns were in cases where the student's area of expertise was different from their own and with weak students whose preparation to undertake a PhD program was inadequate. Some of their comments follow.

A lot of pressure to take PhD students these days, all to do with falling departmental budgets and student numbers and so on.

Serious problem related to bringing a large number of overseas students. Many are marginal. This creates serious difficulties for supervisors.

I worry that the university and/or the department has an attitude that if they've got a minimum qualification of some sort, then we'll get them through a higher degree, and feel an obligation to get them through. ...supervisors doing a lot of work for them. ... I just worry about when they have a PhD whether it's good for this university. But in the end they've got it.

Several supervisors expressed a preference for enrolling students in a master's degree unless they know the students and they feel very positive about them. This can be later upgraded to a PhD. The difficulties of downgrading a PhD to a master's degree if it was not progressing well were highlighted. Two supervisors stated that they prefer slightly older PhD students. In their experience there were more problems to face in supervisory relationships with young people straight from undergraduate study.

Two supervisors described the recourse when mismatches occurred between supervisor and student⁵.

I don't have any qualms at all about people moving away from one supervisor to another. I think that that is a very sensible thing to do as early as possible if people don't feel that they're being adequately supervised. They should go somewhere to someone else.

The right person in the academic sense, but they have to be appropriate to the topic and sometimes the topic changes as you go along. ... also appropriate in terms of matching working methods and personalities and things like that. ... it's not unusual for people to change supervisors a number of times.

In summary, the supervisors viewed the processes whereby a PhD student is assigned a supervisor as largely informal, negotiated and based mainly on academic interests. They highlighted the importance of a supervisor being able to say no to the supervision of a particular student. Most supervisors felt that they could do this in relation to a particular student, but that it was difficult, especially in a small department. Some supervisors also expressed concerns about feeling pressured to supervise local and international students whose area of interest was different from their own, or whose preparation they considered to be inadequate. This is somewhat similar to a finding by Acker, Hill and Black (1994). After semi-structured interviews with 56 supervisors in three United

⁵ The issue of changing supervisors will be discussed later in this chapter in 5.7.4.2.

Kingdom universities they found: "For some supervisors, the 'problem' with overseas students was not located in the students themselves, but in the questionable morality of university recruitment practices. They believed that the high tuition fees overseas students paid resulted in feverish attempts to attract such students and consequent pressures upon academic staff to take on their supervision, even in cases where the staff member's knowledge of the subject area might be limited" (p. 491). The main difference is that supervisors in the Acker et al. (1994) were not concerned about the educational preparation of international students, as were the supervisors in this current study. Students' views about this process will now be presented.

5.2.1.2 Students' Views

None of the students described formal processes for assigning supervision for them. A variety of informal mechanisms led to their supervisory arrangements. These included:

- Nine students who had one or two interviews with prospective supervisors;
- Four who had worked or studied in the same department and knew the supervisor;
- Three who felt it was up to the student to do the groundwork and approach the supervisor;
- One student whose supervisor approached the student with the project;
- One student who enrolled at this university in order to work with a particular supervisor;
- One student who changed supervisors early in order to work with a particular supervisor;
- One student who had his supervisor suggested by another university; and
- One student who followed her supervisor from another university.

Two students did not believe that there were any processes in place to help them find appropriate supervision. Another two students did not believe that there were many academic options available. Nine students felt that they could have said no to suggested arrangements and one did refuse a particular supervisor. One student did not feel that she had the right to refuse the supervision offered; she was one of the two students who did not think that there were any processes in place to help find appropriate supervision. Two students felt that they were talked into doing a PhD by academic staff.

Because [supervisor's name] and a few other people were saying, you know, do this, get it out of the way, here's a scholarship. And even

though I knew I didn't really want to be doing it, I didn't know what else I wanted to do.

Well I looked around for work, and at the time there weren't many jobs around, so I was unemployed for six months. ... then I got this phone call from a supervisor saying that they had a couple of PhD's on offer, I should probably apply if I was interested.

Students underwent a variety of informal processes to arrange supervision. Most students felt that there were processes in place and that they had some say in the outcomes. The actual arrangements for the supervision of the 21 student participants in this study will now be presented.

5.2.2 The Formal Supervisory Arrangements

After engaging in a variety of informal processes the following formal supervisory arrangements were arranged for the 21 student participants in this study. Twelve students said that they had only one supervisor. A further six students had a main supervisor and an inactive associate supervisor. Some of these six saw their associate supervisor when their main supervisor was away⁶. One of the six didn't even know the name of his associate supervisor and received supervision expertise on his topic area from someone who was not a university staff member nor officially part of his supervisory arrangements; that is, defacto supervision.

Only one student had a main supervisor plus an active associate supervisor. All three met together three to four times each year. This student commented that these two supervisors complement each other. Two students said that they had co-supervisory arrangements. In one of these instances the co-supervisors had complementary roles, but it was unusual for all three to meet together.

Unusual to see both [co-supervisor's name] and [co-supervisor's name] together. They work in a complementary way. [Co-supervisor's name] is the more detached theorist and takes a very critical look at the material and orientation of findings. [Co-supervisor's name] is much more the hands-on pragmatist, suggests who to talk with and references. ... Each brings a particular expertise and style, which is a complementary one to the other.

⁶ Issues surrounding this will be addressed later in this chapter in 5.7.4.1.

Towards the end of this supervision the student said roles and styles of these co-supervisors tended to merge. The other student who had co-supervisory arrangements really only saw one supervisor as the other was on leave. This was seen as unfortunate because the co-supervisor on leave had the role of providing support to the other co-supervisor who was supervising his first PhD⁷.

Five of the female students had female supervisors. The other six female students had male supervisors. All 10 male students had male supervisors.

Twelve of the 21 students said that they chose their supervisors. There was general agreement from the supervisors of these students. They either said that these students chose them as supervisors or a small number were unsure how they came to be supervising the students. One of the 12 students who said she chose her supervisor in the first interview for this study, claimed in the second interview that her supervisor was allocated and that she did not have a choice. The relationship between this student and supervisor had begun to deteriorate between the first and second interviews⁸.

Four students said that their supervisors were allocated to them. In one instance the student said the allocation of the supervisor met his specified requirements and that he could have said no to the supervision. The supervisor in this case said the Head of School recommended him. Another student in this group, after submitting a general topic in which she was interested, received a letter advising her of the name of her supervisor. This student had heard of the supervisor, but had not met her, so rang and arranged a meeting that, she said, went well. The supervisor in this instance said this supervision came her way, "ad hoc". The third student in this group said the department initiated her supervisory arrangements, her supervisor was assigned and she had no choice. She added she had already had a change of supervisor. The reason she was given for the change of supervisor was lack of staff in the department. She said she was not consulted and had no say in the assignment of either supervisor. Her supervisor said she changed to him from another supervisor because of a change in the focus of her

⁷ This issue will be discussed later in this chapter in 5.3.3.3.

⁸ This matter will be explored further later in this chapter in 5.3.3.3.

topic and a personality clash with her previous supervisor. The student admitted that the second supervisor was better for the academic aspects of her supervision, but said she had a very good relationship with her former supervisor⁹. The final student in this group had her supervisor allocated to her at another university. This student then followed that supervisor when she changed her employment, an account that was confirmed by her supervisor.

Two students felt that their supervisors chose them. In one of these cases the supervisor said he had chosen the student. In the other instance the supervisor was unsure how he came to supervise the student. One of these students cautioned that it is important who chooses whom in the supervisory relationship. When the student chooses the supervisor, maybe the student has preconceived ideas and expectations. When the supervisor chooses the student (as in her case) they develop a relationship over time.

One student had her current supervisor recommended to her by her previous supervisor who had left the university. Another had his current supervisor suggested by his former supervisor at another university. This was due to a change of direction in his research. The supervisors in both of these cases provided similar information. The last of the 21 students said his supervisor was suggested by industry. The supervisor in this case said that the student had moved to him and this university because he was dissatisfied with his supervision at another university.

Students were most likely to choose their supervisors for a combination of academic and personal/interpersonal reasons rather than either academic alone, or personal/interpersonal reasons alone. Eleven of the 21 students chose their supervisors for academic and personal/interpersonal reasons, six for academic reasons, two for personal reasons, one said her supervisor chose her and one stressed that she had no choice regarding her supervisory arrangements. Comments from some of the students who made their choices for both academic and personal/interpersonal reasons follow.

If the chemistry doesn't work, I can't work with the people.

⁹ This divergence of opinion between the student and supervisor will be explored further later in this chapter in sections 5.3 and 5.4.

Personal as well as academic, personal a really big aspect. ... Basically because ... when you don't feel you get along with someone or you feel like there's some sort of problem there, you're much more scared to approach them ... you sort of think I won't ring today, I'll ring her tomorrow and that kind of thing. And obviously with a PhD you can't afford to do that.

Liked the topics, liked the way he works.

I think I probably am peculiarly enough in that particular respect reasonably conservative. And I think also my supervisor is, so that we get on well. Whereas if you had someone with very different expectations, it wouldn't work. If I had someone that wanted to hold my hand and lead me through the academic world, I'd bite their wrist off. ... the fact that basically he works in the way that suits me is terribly important.

One of the six students who said he based his choice of supervisor on purely academic reasons gave personal reasons in his list of requirements for a satisfactory supervisor. Another said she didn't really have a choice regarding her supervision. A third said his choice was for "mainly academic" reasons.

The two students who based their supervision selections on personal and interpersonal reasons were the same two students who felt that they were talked into doing a PhD by academic staff. This was outlined earlier in this chapter in 5.2.1.2. One of these students made the following comment.

Not, not academic at all. ... I guess the reason was I got on with him ... I feel what I want from a supervisor is somebody who's gonna show enough enthusiasm and encouragement to keep me going. I have this maybe egotistic idea that I can manage the material as long as I've got somebody who can sort of keep pushing me along and keep being a contact I suppose. So it was personal.

However problems relating to the choice of a supervisor for personal reasons emerged for this student. In her second interview for this study she was distressed that her supervisor was removed from her topic area. It was a dilemma for her. She was reluctant to break this supervisory relationship that was good on a personal and interpersonal level yet she wanted more topic expertise. When struggling with ideas, her supervisor did not have a grasp of the area and thought she was going off on tangents. He was not able to work through the ideas with her and kept suggesting new things:

You do need somebody who can sort of say whether these ideas are feasible.

This student got to the stage she wanted:

to scream at him sometimes, you know, no that's not what I want to do. There is something here that I want to do, and it's hard, it's going to be hard to actually work out what it is, So what I really needed I guess was somebody to say look I see what you're trying to do here. You're trying to pick up on this thread and this thread and this thread. And to give some sense of yes work through that, it's worth doing.

The other student who chose his supervisor for interpersonal reasons said:

A lot of academics you deal with, you can feel slightly, kind of lower than them ... intimidated, to a certain extent. ... wanted to work with someone who treated me as a colleague.

During the process of choosing their supervisors 12 of the 21 students either knew about their supervisor's reputation or verified it in some way. One of these students chose her supervisor out of every possible academic person in Australia. She did this after looking into it very thoroughly. This student proceeded to PhD after ascertaining that her supervisor was intellectually capable, and with the testimonials of her students. Two other students commented that their supervisors had good reputations amongst students. A further four investigated or knew of their supervisor's reputation to some extent. They tended to have met their supervisors professionally once or twice or knew of their reputations superficially. The remaining five students did not. Reasons students did not inquire into their supervisor's reputation included having allocated supervisors and therefore no choice regarding the selection and making the selection after interviews with prospective supervisors.

In summary, formal supervisory arrangements were put in place for these students after a variety of informal processes. Nearly all the students in the sample only had one active supervisor. Just over half the participants felt that they chose their supervisors, the most likely basis for this choice being a combination of academic and personal/interpersonal reasons. During the process of choosing their supervisors, most students either knew about their supervisor's reputation or verified it in some way.

5.2.3 The Use of Committees in the Supervisory Process

None of the 21 students in this study had a supervisory committee or panel as a regular mode of supervision. One supervisor, who had worked in the United States of America for three and a half years, thinks that if committees are chosen well they can be very

important and useful to students. They get expertise in different backgrounds and methods. He acknowledged that they are more labour-intensive than the current model. Another supervisor thought it would be quite useful to have a supervisory committee that met twice each year. He also acknowledged associated workload problems.

It would streamline and assess the process that goes on anyway of me bouncing ideas off colleagues. In a small department it would be awkward to do this because no one wants additional duties. Everyone has got their own supervision.

Committees were set up however for probationary PhD candidates to confirm their candidature at the end of one year's full-time or two year's part-time study, or to deal with "problem" students or supervisors. Five of the six students referred to in Chapter 4 who were admitted to probationary candidature met with a committee to confirm their enrolment. The sixth student withdrew from candidature just prior to the committee meeting. In addition to this two students were required to meet with committees when there were concerns about their progress. One supervisor said that a committee could be set up to deal with a complaint by a student about a supervisor. There was no example of this in this study.

The five students who met with a committee to confirm their enrolment had a variety of thoughts and feelings about the process. Some of these thoughts and feelings follow.

And that's taken a lot more specific supervision because what you're coming up with is not just work. It's a piece of writing that's directed not only to your supervisor and sympathetic people, but to people specifically outside your area of study and it has to be comprehensible to them and seem like a real PhD to them. It's not exactly clear to me how it's really conceived. Because theoretically they can say yeah or nay, but the idea is also that you shouldn't be there doing that, cause you have to be interviewed for a couple of hours, you shouldn't be allowed to get to that stage unless you're going to pass. So it's a funny thing and it does require a lot of work and it's quite, it really prevents you from doing other work. Matter of proving to who ever that you will be able to complete something like that.

You have to give a report to the department. There were representatives from the department there. Basically to say yeah or nay. ... Apart from the supervisor there were another three. ... I gave a presentation, and then was asked questions.

This student said he supposed this was helpful. He then went on to say that he felt like a 17 to 18 year old, and "didn't need that sort of crap". He possibly even found it unhelpful being treated like a 17 to 18 year old undergraduate. Another student said that

it went smoothly and that he received a moderate amount of feedback. He found this helpful in that it confirmed that he was heading in the right direction. A third student reported that he was concerned about the outcome.

Two of these five students withdrew from candidature in good standing shortly after these committee meetings. One of the two attributed this in part to the transfer meeting not going well.

Supervisors also had opinions and feelings about the committees that were set up for candidates to transfer their candidature from probationary to full. One supervisor described helping his student construct a 5,000-7,000 word paper on the argument, the breakdown of the chapters, rough bibliography, and the methodology that is taken up in the thesis. The student presented this to the committee. This supervisor was quite comfortable about the process. Another supervisor asks his students to write a conference paper that becomes the basis of the proposal his students present to the transfer committee. He believes this coagulates their thoughts and gives them direction. When they both review the paper they start going over the whole of the project.

One supervisor commented that he understands that all PhD candidates in the Arts Faculty now have probationary candidature initially. He expressed concern that the 5,000 word document students were required to prepare for the transfer committee distracted them from their thesis work. He also felt that the Arts Faculty was too prescriptive about who has to be on the committee. The logistics of getting the people together was problematic. Apart from these concerns this supervisor found the transfer committee meetings to be quite beneficial and thought his students did also. It required the students to be more reflective and more focused about exactly what it was they were doing. He added that it was good to have the perspective of people other than the supervisor and student, but doesn't believe the written submission needs to be so long.

Three supervisors described the impact of the committee on their students who were already in some difficulty with their progress. One supervisor said that the impending appearance before the transfer committee caused a "thesis crisis" for his student. This student withdrew from candidature before the transfer meeting. The second supervisor described "tremendous pressure" on his student primarily because he is a part-time

student who works full-time. This student is one of the two that withdrew in good standing shortly after the committee meeting. He cited work and family commitments as the reason for his withdrawal. The third supervisor expressed concern that his student was not listening to him and not doing the things that they had mutually negotiated. This student also withdrew in good standing shortly after the committee meeting. He cited the fact that the committee meeting did not go well plus work commitments as the reasons for his withdrawal¹⁰.

One of the two students who were required to meet with committees over concerns about their progress claimed that it was due to a communication error. He had not received notification that he was required to provide a progress report. As a result he was asked to meet with a committee. The other student reported an experience she had found extremely distressing. This student's main supervisor had recently been on six months leave. During this period her associate supervisor supervised the student¹¹. The student thought she had made good progress under the supervision of her associate supervisor. However, when her main supervisor returned from leave, she was dissatisfied with the student's work and arranged for the student to present her work to a group of people. Two main issues concerned the student. The first was that she had been working on the project for two and a half years and in her words "all of a sudden, it just wasn't good enough".

I've been working really hard and then for someone to turn around and question my work, sort of you know, two and a half years down the track. If there had been a problem with the actual work, I think it should have come up earlier.

The second issue for her was that the committee meeting date was set for almost two months after the day she found out about it. This fact is in conflict with her supervisor's statement that there was a four-week period until the committee meeting. The student described her feelings:

It really, really upset me. I spent about a week crying. ... A lot of that time, and this may be my fault, was wasted worrying.

¹⁰ The particular pressures for part-time candidates will be discussed later in this chapter in 5.7.1.

¹¹ Temporary change of supervision will be further explored later in this chapter in 5.7.4.1.

The student met with the committee of four that included her main and associate supervisors, the Head of Department and one other person. She described this as “really stressful, that day”. She said she walked in and burst into tears. She described herself as “little me” and “feeling I was being crucified”. The discussion with the committee focused more on her dissatisfaction with her supervision than the quality of her work¹². The end result was that the associate supervisor took over the supervision of this student. The student was happy about the outcome stating that she had a good relationship with this person. She described the whole experience as follows.

Really, really bad experience. It was actually very anti-climatic because I knew that that day, if I actually stated my case, I would be able to get appointed a new supervisor. But I didn't realise how cold everybody would be. And I didn't think that [supervisor's name] would actually refute the fact that we had problems. We had problems from the very beginning.

This student's original supervisor was as devastated by the committee meeting as the student. She was concerned about the quality of the student's work and said to her that she would like her to talk informally to a committee. This decision was for the student's benefit and also her own. However the student claimed no one told her the committee was set up for her benefit. The supervisor said things got “off the rails” and described:

a sense of there being intellectual problems. In the sense of we need to work out this and that. And what are you saying here in your argument. But at the last meeting [committee meeting], in fact what emerged was her sense of personal problems, vis-a-vis me. And as a consequence of that, I have passed her over to her associate supervisor who's taking over as primary supervisor.

The original supervisor does not think that she was the main problem and described the actual committee meeting as follows:

It was awful. Oh God it was really awful.

Some other supervisors thought it was a good idea to set up committees as backup to deal with “problem” students. They believed it helped the students and provided support for supervisors. Regarding one of the two instances described above where this occurred

¹² The issue of her relationship with her supervisor will be explored further later in this chapter, particularly in 5.3.3.3.

for students in this study, the supervisor reported that a departmental committee was set up after a poor annual report for the student. Another supervisor also reported using the annual report to manage and improve student performance, but in this instance it did not progress to committee stage. This supervisor had a lengthy discussion with his student about what he expected and what they could do about it. He set goals about what he would like to happen before he wrote the annual report, so that he could write a better report. He described the situation as a "little crisis" but said it seemed to clarify and improve the relationship. This is similar to what Hockey (1996a) advocated. He suggested the negotiation of a written contract between supervisor and student for dealing with difficult or problematic supervision. In the above case, the contract was not written, but very clearly articulated so that both parties knew what they had to do so that the supervisor could write a satisfactory annual report for the student.

In summary, none of the students in this study had a supervisory committee as a regular mode of supervision. Committees were set up however for probationary PhD candidates to confirm their candidature or to deal with "problem" students. Five of the six candidates that were admitted to probationary candidature met with a committee. Two of these students withdrew from candidature in good standing shortly after the committee meeting; one attributing this in part to the committee meeting not going well. The sixth student withdrew from candidature just prior to the committee meeting. There were differences of opinion regarding the usefulness of this process. Students in particular generally did not find it helpful.

In addition to this two students met with committees when there were concerns about their progress. One said that this was due to a communication error. The supervisor's account differed, he said it was due to a poor annual progress report. The other reported an extremely distressing experience that resulted in a change of supervision for her. The committee meeting also devastated this student's supervisor. She was concerned about the student's progress and unaware of supervisory relationship problems.

5.2.4 Informal Supervision

The formal supervisory arrangements for most of the students in this study were supplemented to some extent by informal additional help or supervision. This to some extent reflected the ability of the formal arrangements to meet all the student's research

needs. Several of the students receiving some form of informal supervision were reliant on that additional assistance for the satisfactory progress of their research and thesis work.

Only six of the 21 students said that they received no assistance, in addition to their formal supervisory arrangements, in undertaking their research. The other students reported additional help as follows:

- Colleagues in industry (3 students);
- Experts regarding the specific topic (5 students);
- Past and present PhD students (4 students);
- Academic networks and colleagues (6 students);
- Technical experts (2 students);
- Language and learning (3 students); and
- Other team members for the project (2 students).

Some students were dependent on this additional informal assistance. Pearson (1996) in her article based on further analysis of the data collected in the project reported in Cullen et al. (1994), found that all eight students in the longitudinal study sought assistance from other persons in addition to their supervisors. Pearson (1996) interpreted this seeking assistance as a sign of enterprise and independence, rather than a sign of the student being dependent or in difficulty. This was the case for some of the students in this current study, however for others it was a necessity to supplement their formal supervisory arrangements.

So far the processes for assigning supervision to PhD students, the formal and informal supervision arrangements for the 21 students participants in this study and the role of committees in the supervisory process have been described. The choice of a suitable research topic will now be addressed.

5.2.5 The Choice of a Suitable Topic

The choice of a suitable research topic is obviously an important early transaction for PhD students. In many ways it occurs in conjunction with finding appropriate supervision. Seventeen of the 21 students were working on individual topics and projects developed by them with varying degrees of supervisory input into the

development process. One of these students digressed from her original idea and began working on an individual Australian Research Council (ARC) topic and project that she developed further and extended. One student was working on an individual topic and project that was developed initially by her supervisor. A further two students were working on group projects developed by their supervisors. For one of these students the topic and project became more individual as it was developed fully. The remaining student was working on a small group topic and project that had been partially developed by his supervisor. As the student developed it further, it became an individual project.

Supervisors' accounts of their students' choice of a suitable topic were the same as their students' views in all but two cases. These students both said that they were working on individual topics developed by themselves. In one of these cases the supervisor said that the student had taken the work another student had done for his PhD and was extending it. In the other instance the supervisor said the student was working on an individual project developed by a team in industry.

At their first interview nine of the 21 students said that their topic was "well matched" to their supervisor's area of expertise. A further 11 students said that there was a "reasonable match". One of these students after stating that there were not many other academic options around for him, and that the next best bet was looking grim, commented as follows.

Even if there are academic differences between us he is okay about that.

Only one student said her topic was "not matched" with her supervisor's expertise. This was one of the students who had chosen her supervisor for personal reasons. Three students complained of methodological differences with their supervisors.

In summary, 17 of the 21 students were working on individual topics and projects developed by them with varying degrees of supervisor input into the development of the topics. The other four were working on projects developed by their supervisors. Nine students felt that their topic was "well matched" with their supervisor's area of expertise; a further 11 said that there was a "reasonable match". One student said that

her topic was “not matched” to her supervisor’s expertise, she had selected her supervisor for personal reasons.

5.2.6 Summary

After a variety of informal processes, formal supervisory arrangements were put in place for the 21 students in this study. Most students only had one active supervisor and were working on individual research projects that were either well matched or reasonably well matched with their supervisor’s area of expertise. One student’s topic was unmatched to her supervisor’s expertise; the problems encountered in relation to this were described.

The importance of students shopping around before deciding on a supervisor was advocated, along with the importance of both students and supervisors being able to make choices. Students were concerned with personal and interpersonal relationship issues as well as academic matching. Supervisors were concerned about students’ educational preparation, academic matching and personality clashes. The difficulties associated with matching students and supervisors on personal and interpersonal aspects were acknowledged, along with the difficulties associated with making choices in small departments. Phillips and Pugh (1994) advised students that selecting your supervisor “is probably the most important step you will have to take” (p. 8). They suggested selecting a supervisor based on an established research record and how close a working relationship the student wants, although they admitted in general students do not select their supervisors, they are allocated by the department. Just over half of the students in this study believed they chose their supervisors, most frequently basing their choices on a combination of academic and personal reasons. Smeby (2000) advised that in Norway students generally choose a faculty member and ask that person to supervise them. Schiff and Ryan (1996) using 138 responses to a mail survey of advisers of Communication theses and dissertations in the United States, concluded that in “selecting a faculty member, graduate students are to some extent accepting the topics, conceptual frame-works, and methods that the faculty member uses” (p. 33). Most students in this current study supplemented their formal supervision with a variety of informal arrangements.

Whilst several supervisors agreed with Cullen et al. (1994) that supervisory committees were useful to provide students with a broader range of skills and expertise, committees were only used to transfer probationary to full candidature or to deal with supervisory problems. Student feedback regarding these committee meetings was generally not positive. The reason for this may be that students regarded them as hurdles they had to overcome, rather than experts trying to assist them.

The relationships that developed between students and supervisors will now be examined. This is the heart of this chapter.

5.3 The Relationships between Students and Supervisors

Because of the length of the PhD supervisory process, a relationship develops between students and their supervisors. For most of the student and supervisor participants in this study it was important to have good interpersonal aspects within the supervisory relationship.

5.3.1 The Importance of Good Interpersonal Aspects within the Supervisory Relationship

For 17 of the 21 student participants it was important to have a good interpersonal relationship with their supervisors. Whilst some emphasised this was not the goal of the supervisory relationship; they none the less stressed its importance. Some of their comments follow.

Important. ... Interesting balance at times. ... of being pushed professionally, like to rush a paper or give a paper, and yet very understanding of the enormous demands of ...

The supervisory relationship has to do a number of things and I think it is important to retain some reserve in it actually because as a candidate there are inevitably, I think, psychically or psychologically confused emotions that can be coming to the surface. It's very easy to put oneself in a child like situation. ...evidence is that people can project or use relationship difficulties as a blinder, as an excuse or as a substitute for addressing issues. I think it is important to remember ... what you're there for. You're not there essentially to make a good relationship with your supervisor. You are there essentially to produce a piece of research. I think that does have to be clear So there are professional aspects of the relationship as well as personal ... I think that needs to be

quite up front. However, human beings being what they are, and the PhD also being a training in solo research, one is going to be a lot more at ease and in a creative frame of mind if you like, if there is a personal connection. ... if you click or whatever it is with your supervisor and feel comfortable, then discussion is likely to be freer, ... I would characterise a creative relationship rather than a personal relationship as what you are attempting to achieve.

I think it would be very difficult when it's such a long-term project ... if you didn't have a good interpersonal relationship. ... I don't think you could survive if you didn't have a good working relationship. ... talked with other students who haven't ... You can see that that's what's stopping them from going any further.

Very important ... basically because ... when you don't feel like you get along with someone or you feel like there's some sort of problem there, you're much more scared to approach them and, you know, and you sort of think I won't ring today. I'll ring her tomorrow and that kind of thing. And obviously with a PhD you can't afford to do that. ... A bad interpersonal relationship decreases a student's confidence with a direct effect on their work.

More important for the PhD student, because PhD students are capable of understanding the technical aspects. ... or of getting someone else to help them. Can solve technical things, can find your way out even without supervisor. But the interpersonal relationship aspects with the supervisor are really important. Keeps you hanging in.

Fifteen of the 18 supervisor participants thought that good interpersonal aspects within the supervisory relationship were important for themselves and important for their students. Some of their comments follow.

If you can't get on with the student you're supervising then they're going to lose, as are you. And you've got to address that issue right at the outset. ... Right at the outset you've got to recognise that, because you're not doing yourself or your student any good ... you're doing them a disservice. ... from the student's point of view I would imagine it would be very important, because if you don't like your supervisor then it's going to make your PhD very difficult.

Need to have somebody you can talk to ... somebody that you know is kind of there fighting for you. ... I think generally speaking the benefits for them of being able to talk to you and trust you in that kind of personal if slightly distanced way is much more important than the risk of not giving them that.

I think that the student and the supervisor have to work together closely. I think they have to be matched in temperament and in their expectations of supervision. I think it's probably, it's more important than almost any

other sort of relationship other than the marriage relationship, because there has to be a ... complementary element in both expectations and in approaches and in temperament.

If you can't, don't try to come to grips with the student's personality as well as their intellectual ability, you're not going to be a very good supervisor because it's such a long period of study.

Part of the vehicle in developing the student regarding his PhD. ... reasonably good relationship ... otherwise it's difficult for the student to talk about things. Part of your job as a PhD supervisor is to help them ... To do that you need to know them reasonably well. You don't want to send them off to do something they don't really want to do, and they're too scared to tell you about it. ... They've got to be able to say to you I don't want to do this, I'm not interested in it. ... I think it's very important, even at the honours level, to supervise ... hands-on. And have that personal connection where you can keep the student going when they're a bit down and that sort of thing.

They're effectively helping me solve my problems. ... both helping each other ... I think that a bonding does occur between a supervisor and a PhD student. ... it's critical. ... add one more thing ... considerable amount of satisfaction when someone does complete ... certain amount of pride ...

Not essential, but it's very important, because what a supervisor has to offer is not really represented by something cut and dried and mechanical that can be imparted outside the informal relationship.

Two students did not respond directly to the question about the importance of a good interpersonal relationship as part of the supervisory process. One student was unsure whether it was important, whilst another student thought it was not terribly important. The student who said he was unsure had the general attitude in life to get on with anyone with whom he works. The student who thought it was not terribly important commented later that he could discuss things more openly with his supervisor after he got to know him better and their relationship developed and improved.

One student reported that a friend of hers had changed universities to get away from her supervisor. Her friend needed more support and understanding from her supervisor, and her supervisor would only focus on academic matters.

She felt she hadn't got what she wanted from her supervisor, but her supervisor hadn't done anything really wrong.

Whilst 15 supervisors unequivocally said it was important to have a good interpersonal relationship with their students; a further two had some reservations, their comments follow.

When you are supervising a PhD, you have to consider the PhD, and treat the student on a professional basis.

Could imagine situations when you have to be quite tough ... That may or may not be more difficult if there was a close interpersonal relationship.

One supervisor said it was important for some students but not for others.

Most of the student and supervisor participants in this study thought that a good interpersonal working relationship was important in the supervisory relationship. This facilitated discussion that was more open. Many highlighted the purpose of the relationship and stressed that you need more than someone who is nice; academic rigour is also necessary and someone to push you at times. The actual relationships that developed between the student and supervisor dyads participating in this longitudinal study will now be presented.

5.3.2 The Actual Relationships

Most of the students and supervisors in this study developed professional, but collegial working relationships, with good interpersonal aspects.

During their first interviews for the study, 17 of the 21 student participants described their relationships with their supervisors as professional and with good interpersonal interactions. For two of these students there were qualifications. One added the comment “mostly”, and another said the interpersonal interactions with her supervisor had been poor earlier on, but they had improved. The student described a situation where they had “a bit of a hard time last year”, but now “get along pretty well”. They worked through their problems to a certain degree. Comments from some of the others in this group of 17 students follow.

Basically a professional relationship with good interpersonal communication. I think that's how it should be. ... because I think that there has to be, there's certainly got to be a certain level of informality, but when it comes to the crunch, it's the formal aspects that are important because it's important to respect your supervisor's background, experience and knowledge of the area. And also knowledge

of the process of the PhD. it's very important to have that, to feel confident that you've got that person's support.

He is quite friendly. When he comes for discussion or something, he never thinks he is a supervisor or something like that, he'll come and chat as a colleague.

During the first interviews for the study, the supervisors of the above 17 students also described their relationships with these students as professional, but collegial, and with good interpersonal aspects. One of these supervisors called this a "professional friendship". Four supervisors added that their students were also professional colleagues and put these relationships between professional and personal. Three were supervising academic staff and the other had professional links with his student. The supervisor who had professional links with his student said he separates the PhD relationship from the professional and more personal relationship.

Three of the 21 students described personal friendships with their supervisors. The supervisors of these three students also said they had personal friendships with these students. One student said she gets along with her supervisor:

...really, really well. He's a friend as well as a supervisor and that works well for me ... very people person ... It's important to have good rapport with my supervisor.

She added that that it was a friendship, but not an emotional dependence and that her supervisor was "cutting the apron strings wherever possible" in relation to the research. Another student in this group commented that the personal relationship with her particular supervisor suited her, but it wouldn't necessarily suit her with a different supervisor, one she wasn't as compatible with. She stated:

It's a very, very complex and delicate relationship, the supervisory relationship. ... I have been delighted that [supervisor's name] has immediately offered a very equal dialogue as the basis for that relationship. ... there's no pulling rank. There's no hierarchy. It is a very adult relationship and I really appreciate that because that has not been the case in my experience. ... she shares her own situation, she's very open about ... if I've been having trouble getting something togetherunderstanding of a woman's position with children ... and [supervisor's name] certainly does that. ...So, even though, I mean it's not like we sit around and talk about our private lives. But it's just that that is there as a background, and there is a basic empathy there which is a wonderful thing to start.

This student expressed some concerns that they got on so well that her supervisor might not be tough enough with her if the situation warranted it.

... because I think that potentially that could cause some strains at a later stage. But I'm actually very confident in her and her judgement. ... I think the other thing again to emphasise is that certainly by the time you get to a postgraduate level the ideal is that both partners in the relationship are adult and can take responsibility.

Two of the dyads reporting personal relationships were female, the other was a male and female dyad.

The last of the 21 student participants reported a professional relationship with her supervisor, but with poor interpersonal aspects.

It's hard to explain. I only see him if I have to.

She added that she saw her supervisor fortnightly because it was the regulation, but she does not enjoy seeing him, she does not feel comfortable. She did not know why. This student added that she felt more comfortable with her first supervisor who was a woman and more encouraging, but admitted that her second supervisor was a better academic match for her research topic¹³. The student reported having no say either in the original supervisory arrangements, or in the change of supervisors. She was one of the international students. Her supervisor said that he got along well with the student and had a good understanding of her culture.

Four supervisors said that the relationships they develop with students vary from student to student. There was evidence that this was occurring¹⁴. Some of their comments follow.

Different people work in different kinds of ways in very different kinds of working relationships. Some of my students, for example, the last thing they would want to do is to have anything to do with me on a personal, at a personal level. They look to me for advice and guidance and feedback, and all of those things, but, in terms of personalities ... we probably wouldn't get on very well in that kind of situation. Certain other of my students are ... more integrated personalities in the sense that they are less able to separate out their emotional and intellectual and work life and relationships. ... I don't see that as a bad thing, I think

¹³ This previous change of supervision was reported earlier in this chapter in 5.2.2.

¹⁴ The evidence will be presented in 5.3.3.

that's probably a good thing, from a human point of view, and therefore for those students it's in some respects essential that there be that personal dimension as well.

I'm ... friendly with all my students. Exactly how that works depends very much on the student and all sorts of things.

Different for different students; some need to work with the supervisor well, others more at arms length.

Two students stated that they did not want a personal relationship or friendship. One of these stated that she wanted collegiality within the supervisory relationship, but not intimacy. Three other students pointed out that there were dangers inherent within the relationship. One of these commented that you might end up on shaky ground if you develop too personal a relationship, but she acknowledged:

There's no way that you can get around establishing a personal relationship because you have such constant intimate contact with the person. ... basically you're putting yourself and your thoughts and ideas and theories on the line. And that person's got to be able to respond to those, and in responding to those, because it's a very personal part of you, what you're thinking and how you're developing. And if it's always a formal response then you perhaps would feel that you're not really developing as a thoughtful person in the area.

From another of these three students:

I think there are quite rightly safeguards or there's certainly been discussion about for example sexual relationships between students and supervisors. ... I certainly wouldn't institute a prohibition against friendship ... I do think you need to be confident that a friendship could survive disagreement. ... becoming friends, you're inevitably going to develop a very close relationship with your supervisor. If it works well it's probably a relationship that will survive for life. ... I've been thinking about ... trust relationships ... if you're going to share that much with somebody you do need to choose very carefully. And the same thing with a supervisor, because there's such a range of situations that the relationship might need to encompass.

The third students commented:

At this level the boundaries do blur a little.

She felt this can be dangerous and described a situation where a close and personal relationship with her undergraduate supervisor resulted in her trying to please him and thus interfering with her studies. He put pressure on her to help other students rather than pursue her own study. She is now nervous of a close personal relationship with her

supervisor. Despite this, she is one of the two students who chose her supervisor for personal reasons¹⁵.

Two supervisors also expressed concerns about developing personal friendships with students.

I don't as a rule, develop personal friendships with individual students because it's not fair to other students.

When I was a graduate student ... the relationship with the supervisor ...extraordinarily important ... From this side of the fence, I still think it's really important. ... I'm less keen to be sort of personal friends ... I want to be friendly ... I think things can get murky; and then maybe it's a kind of control freak thing. I hope not, you know but ... supervisor first and friends later. ... Supervisory relationship is quite fragile ... The delicate business of a graduate student coming to you ... I remember the feeling of putting yourself on the line, and you know, can you do it? It's a big hurdle, what personal baggage do you have tied up in it? You know, what do you look for from this person who is nominated as your supervisor? I think there's all that kind of, yes really quite emotionally intense stuff. Even if it doesn't come out on the surface, I think it's not far under the surface. And I think because of that the supervisor-supervisee relationship isn't so robust as to take the "let's be friends" or "let's introduce other components" into it.

Two students reported difficulties in getting past the student-teacher relationship with their supervisors, and did not feel relaxed. One of these was the student who considered her relationship with her supervisor to be professional, but with poor interpersonal aspects, reported above. The other described a situation of not seeing his supervisor as a "superior", but in a sense of feeling not very relaxed and free in speaking. He does not think his supervisor is avoiding a more collegial and personal relationship, rather that the supervisor senses the student is more comfortable talking about the work. They have met over coffee a couple of times. This student is one of the students who proceeded directly to PhD from undergraduate studies.

Two students and their supervisors reported having supervisory meetings over a cup of coffee. One student commented this was friendly, but no boundaries were broken. Two

¹⁵ This was reported earlier in this chapter in 5.2.2.

other students and their supervisors said that they sometimes had lunch together. These lunches were within working hours and on the university grounds; sometimes other students were also present. Two other students and their supervisors reported some outside, out of work-hours social interaction.

In summary, at their first interview for this study, 17 of the 21 student participants described their relationships with their supervisors as professional and with good interpersonal interactions. Three students said that they had personal friendships with their supervisors. There was supervisor agreement regarding these 20 supervisory relationships. One student, a female international student, reported a professional relationship with her supervisor, but said the interpersonal aspects were poor. Her supervisor said that he got along well with the student and had a good understanding of her culture. Some supervisors said that the relationships they develop with students vary from student to student, whilst two supervisor and five students pointed out the dangers inherent in the supervisor-student relationship, and of developing a close personal relationship.

One student highlighted that there were changes in her relationship with her supervisor due to the stage of her research.

The supervisory relationship is always a deeply personal one, and must adjust to the habits as well as the capacities of the two people involved. But nevertheless I think this thing about phases, that there are different approaches that probably are more productive in different phases of the process.

One supervisor also said that there were contact and relationship changes due to other factors in the lives of students and supervisors¹⁶. These changes were viewed as a regular and normal part of the supervisory relationship and process. However a number of students and supervisors reported relationship changes that were not always inherent in the supervisory process. These changes will now be presented.

¹⁶ This issue will be explored further later in this chapter in section 5.7.

5.3.3 Changes in Relationships between Students and Supervisors

For some of the student and supervisor participants in this study, their relationships did not change significantly apart from the expected fluctuations described above, throughout the supervisory process. The three student and supervisor dyads that reported personal friendships successfully maintained those friendships. For the student who said the interpersonal aspects of her relationship with her supervisor were poor, things remained much the same. This student's supervisor however originally described his relationship with the student as a professional relationship with good interpersonal aspects, although he expressed some concern that she didn't show any urgency regarding her studies. Later on he described a developing tension due to the student's lack of academic progress, but thought that they got on reasonably well considering the academic difficulties. He felt that he'd applied his knowledge of the student's culture and combined this with an authoritative but polite approach. He said:

I don't think it's gone terribly badly. I would be surprised to learn that my behaviour pattern had been a major contributor to [student's name] problems. If I discovered it had, I'd be very concerned and do something about it.

Five of the 17 students who said they had professional, collegial relationships with good interpersonal aspects, with their supervisors also maintained those relationships. There was agreement from their supervisors regarding this. However for the remaining 12 students in this group, changes occurred during the supervisory process. Some of these relationships improved and varying degrees of personal friendship developed, some fluctuated, and others deteriorated.

5.3.3.1 Improving Relationships

Four students who originally had professional, collegial relationships, with good interpersonal aspects reported improving relationships. One of these students said her relationship with her supervisor improved as she came to terms with the very specific area she is working in which is her supervisor's main field. She now describes her relationship as more collegiate and personal. Her supervisor also reported an improving relationship and professional activities outside the supervisory relationship. Another student, one of the two reported above as having difficulty getting past the student-teacher relationship with his supervisor, also described an improving relationship.

Originally he said that they had a more academic and less personal way of relating. He also said he had no real idea of what one is supposed to do in the supervisory relationship. Pole et al. (1997) also reported this finding. Students in their interview study in the United Kingdom “indicated that they were often unsure about the role of their supervisor at the start of their PhD” (p. 52). They postulated that this was because the student-supervisor relationship was different from any that students might have experienced as undergraduates. The student in this current study had proceeded to PhD directly from undergraduate study. He said that over time there were some moves towards more general relations, but not really anything very personal. Occasionally supervisory meetings were conducted over coffee or lunch. He became more relaxed with his supervisor and able to express his thoughts and ideas.

It seems like ...our relationship is ...more comfortable than it was before. ... like there's been a few times where we've had lunches, rather than sitting in the office. ...more friendly ...more relaxed.

This student's supervisor also reported some development of a friendship over the course of the PhD. Another student said that his relationship with his supervisor was becoming closer. He feels this is due to his supervisor putting more faith in his technical ability. With the development of trust and faith in his capabilities, a closer personal relationship developed with his supervisor. His supervisor also described their ongoing relationship as between professional and personal. The fourth student in this group also described a friendlier, more personal relationship. He felt this was due to working together, and going to lunch together and discussing the work and other things. This more personal way of relating with his supervisor was very important to this student. He believes the encouragement that was provided in this improving relationship, accelerated the progress of his research. His supervisor said that they had been working together intensively and that they had developed a slightly personal relationship. These last two students are international students.

5.3.3.2 Fluctuating Relationships

The relationships four students had with their supervisors fluctuated, and had to be continually renegotiated. Professional and collegial relationships with good interpersonal aspects originally described these four relationships.

One student, who had originally chosen his supervisor because of his attention to detail and academic rigour, repeatedly became frustrated when his supervisor exhibited those characteristics. This student resented the “stiff way Academe operates”.

The style in which it seemed PhDs were done was uninteresting in the extreme.

He was unsure whether to attribute this to his supervisor, the department or the university. From the student's perspective methodological differences and his heavy work commitments were the main sources of concern between student and supervisor. This student's enrolment was part-time. Initially this student's supervisor described their relationship as fine and collegial, but was always concerned that the student had a consultant's rather than a researcher's approach to his PhD. The student's educational background was honours and masters degrees; both were old and in different disciplines from each other and the PhD. The supervisor also expressed some concern that the student was difficult to pin down because of his work commitments. Over time the supervisor described increasing frustration and a period of awkwardness because of the student's lack of progress. This led to discussion and a period of intermission.

I was spending a lot of time in just trying to bring him up to speed and I was being frustrated in that I couldn't do it. I couldn't see where the problem lay. And so we decided maybe that twelve months off would do him good.

Twelve months intermission and the student's return from intermission with a new topic more related to his work, plus a more flexible approach towards research methodologies by his supervisor, has restored some optimism for both parties.

Another student described taking charge of the relationship more herself. Initially she had been looking for support and guidance, now it was more an academic relationship. Her supervisor was very busy and she felt lost.

And so I'm feeling a bit ... a little bit lost and out in the cold. But I would like a bit more contact. ... It's hard to set it up. ... she's [supervisor] been really busy ... I haven't pushed it either. ... I don't feel that desperate. ... I feel like much more I just check in ... and let her know what I'm doing and where I'm going. ... specifically for what I want to get from her, and from the relationship.

This relationship subsequently developed further and improved when the student did some sessional teaching work with her supervisor. She also began to focus on the positive rather than the negative attributes of her supervisor, and realised that the earlier

problem was just time. She described the changes over the supervisory process as follows:

It's hard to know how much it's me that's changed over the three years and how much it's my relationship with [supervisor's name] that's changed and how much I think also [supervisor's name] herself has actually changed in how she supervises. And I think that she has, she also has made some changes and I also have made some changes and between the two of us it's happened.

This student's supervisor was aware of some problems and issues along the way in her supervision of this student. She was very willing to negotiate through these issues and adjust her supervision accordingly. She also described an improving and more personal relationship as they undertook teaching and other professional activities together.

Another student described an improving relationship with her supervisor.

Now full trust and support I would say.

However severe difficulties with her associate supervisor and other staff in the department when her main supervisor was on leave, eventually led to a deterioration in her relationship with her main supervisor. She felt he was sandwiched between her and the others, and that her supervisor let her down in the end¹⁷. This student's supervisor said that there were no changes in their relationship and that he gets on well with the student.

Finally the fourth student was having difficulty deciding exactly what she was going to pursue for her PhD topic. She had chosen her supervisor for personal reasons, and they were not matched theoretically. The plan was that he would find her a more appropriate supervisor when her topic was more clearly defined. She felt the problem was that her supervisor was not theoretically able to understand what she was grappling with. This led to strains in the relationship. The student sensed her supervisor's frustration and felt he wanted her to be more pragmatic. She reported a slight distancing from each other because it was not a satisfactory academic arrangement. Her supervisor was frustrated and impatient with the student's ambivalence regarding the topic and research approach, but thought that their interpersonal relationship remained much the same. He was

¹⁷ The difficulties experienced when the main supervisor was on leave will be reported in 5.7.4.1.

concerned though regarding her academic progress and the fact that she was on a scholarship. This student took a twelve-month period of intermission. During this period she worked on an individual Australian Research Council (ARC) project which she further developed and extended. After her return from intermission it was planned that the further development of the ARC project would subsequently become her PhD project.

5.3.3.3 Deteriorating Relationships

Four students reported deteriorating relationships with their supervisors. These students originally said the relationships were professional, collegial, and with good interpersonal aspects. The first student reported a deteriorating relationship with his supervisor after a major difference of opinion over names on a publication¹⁸. This student was also generally dissatisfied with the amount of time and supervision he received.

I was generally dissatisfied with the amount of time, the supervision. ... I'm sure he has the knowledge actually, I've seen him lecture. It is more that I think he is trying to find an easy way out as a PhD supervisor. He's not prepared to put in the time. ... I think at the end of the day with an academic that supervision is the easiest thing to let slip a little bit.

He also complained that his supervisor had forgotten appointments on at least three occasions. After a series of major disagreements, the student felt that his supervisor had backed off, but that the relationship would never be back to normal.

It'll never be back to normal. It's like a, any male-female relationship. Once you've had a big blue you'll always remember it.

As both the student and supervisor in this instance were male, this likening to a male-female relationship was explored further.

... in the sense that once something has gone wrong, then you might in all consciousness forgive him for it, but subconsciously you've stored it away. And if it happens again ... I don't have the respect for the man that I should have being my PhD supervisor.

This student was looking for alternative supervision. He also relied heavily on informal supervision¹⁹. Prior to the problems he had had some social interaction with his supervisor and still quite liked him on a personal level. This student's supervisor said

¹⁸ This will be reported later in this chapter in section 5.4.

¹⁹ This was described earlier in this chapter in 5.2.4.

the he and the student had had a problem over a publication, but that they had sorted it out. He said that he had backed down, despite feeling unhappy about doing so, because:

I didn't want to jeopardise the supervision, the ongoing relationship.

He also said that he was concerned about other issues that arose during the exchange between the student and him over the publication²⁰.

What did come out of the exchange between [student's name] and myself was his perception of me, and my role in assisting him and it concerned me greatly, his perception of how I supervise him. ... he felt as if he was being short-changed all the time with regards to contact with me, with regards to how much I should provide assistance to him and that sort of thing. And it flawed me.

The supervisor said that they had sorted things out but like the student acknowledged that it was still in the back of his mind.

It's okay, it's fine ... It's okay but it's always in the back of our ... there's an awareness that it happened. You know it's, nothing's ever the same once something like this happens.

There were however ongoing problems and arguments for both supervisor and student in this supervisory relationship.

The second student in this group was the one that qualified the earlier relationship status as professional and collegial with good interpersonal aspects with "mostly". He had chosen his supervisor for personal reasons. There had also been some social interactions with his supervisor. In relation to their supervisory relationship the student said that they had had their moments. They had argued. He thought it was good to be able to argue. It demonstrated that he and his supervisor had a fairly open relationship, and that he felt safe enough to be able to argue with his supervisor. However the student reported feeling anxious when he had meetings with his supervisor.

He gets himself a bit anxious, and I get a bit anxious. And I think we feed off each others ... it's not anxiety, but nervousness. ...I'm [supervisor's name] first PhD student, so it's a learning process for him as well, I would imagine. You know, I don't think that you are born to be a supervisor. ...So he's still learning I suppose, he's a bit uncertain about how to handle things. Also he has got a lot on his plate.

He contrasted his relationship with his previous honours degree supervisor:

²⁰ The issue of this supervisor's style will be further explored later in this chapter in section 5.5.

He was a very calm person. Very quietly spoken. He'd take the time to sit down. If you didn't get things the first time, he'd go through it two to three times if necessary. He really took the time to help you out.

The student had asked his honours' supervisor to supervise him for his PhD. However he was unable to do so. The reason for this did not come up in the interviews for this study. The student described his own anxiety or nervousness as relating to his progress. He did not see himself as a "High Distinction" student. His honours degree was graded as second class honours. Moreover, he was one of the two students who felt he was talked into doing a PhD by academic staff in the department. This student's supervisor was doing his first PhD supervision and, accordingly, a co-supervisor had been appointed. But, unhappily, the co-supervisor was on leave and unavailable. The student withdrew from candidature after approximately one year's full-time candidature, and before he transferred from probationary to full PhD candidature. His supervisor acknowledged that he and his student had argued. He said it was "not pretty at the time", but he thought it was a good experience in that they both communicated openly and frankly. He thought that communication between his student and him had improved since the argument. He was both surprised and disappointed when his student withdrew from candidature; he had not seen it coming.

When he told me, it caught me totally off guard. ... And it was disappointing too. ... The question becomes should I have been more aware of things?

Another student, described her relationship with her supervisor as professional with good interpersonal aspects in the initial interview:

interpersonal aspects within the professional relationship are fine, but have not been challenged to date.

At the second interview which was just over a year later, she said things were much the same interpersonally, but was starting to question their academic match (originally described as reasonable) regarding her PhD topic.

[Supervisor's] been as good, I think, as she can be with what she's got in her understanding. But I've learnt what the limits of her understanding are this year without any animosity to her.

By the third interview, almost a year after the second interview, this student's relationship with her supervisor had broken down completely and she had arranged alternative supervision. A lack of progress and her supervisor's inability to help her

contributed to the relationship breakdown. Academic advice was particularly important to this student because her educational background was not in a traditionally academic discipline. She complained that her supervisor:

Rather than addressing the body of the work she addresses the abstract because it's one page. I actually just think she's very busy.

Despite the above statement, the student reported that she and her supervisor were unmatched theoretically and had methodological differences. She also complained that her supervisor had failed to keep appointments on about five occasions, and had neither returned her written work nor processed necessary paperwork. The student began looking for and found alternative supervision, someone closer to her methodologically. She described her relationship with her new supervisor as professional, but said they may have a personal friendship when her PhD is finished. Meetings with her new supervisor were held at either person's home or the university depending on what was the most convenient, but the focus of such meetings was always her thesis. The original supervisor of this student described her supervisory relationship with this student as fine during the first interview. She said that, 15 months later, there had not been any changes, but expressed concern that the student's perspective was more suitable for a book than a PhD. She was managing this by allowing the student to write and get it out of her system. The plan was to then edit the writing in line with PhD requirements. A year later she said there was no problem or change in their relationship, but that the student was co-supervised by someone in another department. The student had not been taking her advice. The student was writing copiously but could not focus; the new co-supervisor had offered to help the student with this.

The fourth student who had a deteriorating relationship with her supervisor originally reported having a professional relationship with good interpersonal aspects. She had qualified this, however, by saying that earlier the interpersonal aspects were poor, but that they had worked through their problems. Nevertheless she was concerned that her supervisor was avoiding personal aspects of the relationship. She felt her supervisor would talk with her personally to a certain point, only to make an explicit and very noticeable effort to stop.

She just makes sure that there's a really big wall between us, so that I know I am the student and she's like my mother.

I know now that she likes to keep the ... professional thing really there, like really apparent. So I try and ... really keep my distance. I only really ... let go and laugh and stuff when she does so that she doesn't get shitty with me.

This student wanted a more personal relationship with her supervisor, encompassing social intercourse and more understanding about what was happening in her life. She said she was not looking for a really close friendship. She described such a relationship with her honours degree supervisor; allowances were made both ways. This student started her PhD straight after her undergraduate studies and had a second class honours degree. She saw this as a contentious issue between her supervisor and her. She reported her supervisor said that she should have been enrolled in a masters rather than PhD degree. The student felt that after you have been accepted into a PhD you should be given a really good chance to make that work, rather than being told students should do masters first. She also resented what she felt were negative comments about her age and felt she did not need direct or indirect "digs" regarding her qualifications and age. Another source of contention for this student was that her supervisor had told her that she would prefer not to be contacted whilst she was on leave. This supervisory relationship subsequently broke down and her associate supervisor took over her supervision²¹. Her associate supervisor had previously supervised her honours project and taken over her supervision for six months when her main supervisor was on leave. She was initially described as a fantastic woman to work with and the student said that she got on extremely well with her. Just over 12 months later this second supervisory relationship was in trouble. For six months or so things went reasonably well, although the student felt the relationship was a bit more formal and a bit less friendly. She also felt that her supervisor, because of a new university policy, was putting pressure on her to complete as soon as possible. Then the student became ill, and after notifying her supervisor regarding her illness, did not contact her for approximately six months. The student was upset that her supervisor did not contact her.

She didn't actually make an effort to contact me.

The student contacted her supervisor at this time because she had received her annual report and did not feel well enough to complete it. She was also contemplating applying

²¹ This was reported earlier in this chapter in 5.2.3.

for a period of intermission to regain her health. Her supervisor advised her to complete as much of the report as she could and send it in with a letter of explanation and a report from her doctor. The student was very distressed by this response.

I feel like worse the past couple of days since that phone call. ... I'm quite bitter about that. ... It felt like [supervisor's name] thought, and is going to say that I've been slacking off and just not doing my work. And I just find that so ridiculous and offensive because I know that ... Feeling sick, and then having that sort of compounded by the person who's meant to be the other half of your team ... not going into bat for you at all. ... it was just really, really disheartening.

This student's original supervisor was not aware of any problems within her relationship with the student. She was one of the two supervisors who were wary of developing personal friendships with their students. She did however have concerns about her student's educational background. She wondered whether second class honours was appropriate entry to a PhD. She queried would the student be better served by doing a master's degree and then a PhD? Over time this supervisor became concerned about her student's academic progress and arranged for the student to meet with a committee. She did this to help both the student and herself²². At this committee meeting she discovered that the student was extremely unhappy about their relationship, and the student's supervision was reassigned to her associate supervisor. After the committee meeting this original supervisor wondered whether there was a type of emotional dependency with this student, the terms of which were not entirely clear to her.

This student's new supervisor described her relationship with the student as "maternal". Whilst she recognised the student's need for an older woman who can fulfil a number of things, she saw it as part of the problem with supervision.

That there are conflicting roles. ... a supervisor is not a mother, and if you see the maternal role as one of building up self-esteem and giving approval ... You can do a lot of that, and I have done a lot of that, but there's a point at which you have to turn into the bad mother if the work is not up to scratch. And that's what's happened.

²² This was reported earlier in this chapter in 5.2.3.

The student's new supervisor, like the original supervisor, became dissatisfied with the student's academic progress. As a result of this and the student's poor health, the student has intermission for one year.

Most supervisor-student dyads in this study formed various satisfactory working relationships. The interpersonal aspects of these relationships were particularly important to the international students. Two reported improving relationships, unfortunately the third was dissatisfied with the interpersonal aspects of her relationship with her supervisor. Cultural influences and having a male supervisor may have contributed, although the student said she did not know what caused the problem. Whilst acknowledging a better academic match with her second supervisor who was male, she said she had a better relationship with her previous supervisor who was female, she found her more encouraging and supportive. After his 1992 questionnaire survey of faculty at the level of assistant professor and above in the humanities, social sciences and natural sciences at all four universities in Norway, Smeby (2000) found that gender does matter. There was a significant same-gender tendency in supervisory relationships; that was stronger among women than men. The supervisor was concerned about his student's academic progress, but unaware of relationship issues. A feature of this poor interpersonal relationship was the differing opinions of the student and the supervisor regarding what was occurring in the relationship. The fact that supervisors and students perceptions about relationships can differ has already been identified (Powles, 1988b, 1994; West et al., 1988).

There was a general tendency for the relationships between students and their supervisors to change over time due to the stage of the research and the occurrences in the lives of both students and supervisors. For some dyads however there were relationship changes outside these regular patterns. Some relationships improved, some fluctuated and required re-negotiation, and some deteriorated. Factors involved in the improving relationships were the development of trust, working together closely, and the occasional interactions over coffee or lunch. In the relationships that fluctuated or deteriorated, the issues of the supervisor's supervisory style and the student's expectations of supervision, methodological differences and a lack of a match regarding topic expertise were often contributing factors. A characteristic of these fluctuating and deteriorating relationships was that the students and supervisors, to various extents,

were providing different accounts of the situation. In the relationships that fluctuated both students and supervisors made adjustments and renegotiated the relationship. In the deteriorating relationships this renegotiation either did not occur or was unsuccessful. In the deteriorating relationships two of the students had atypical educational preparation for PhD candidature and the other two had second class honours degrees. Three of these four students were in the 23 to 29 age group and two went straight from undergraduate to PhD studies. Three of the supervisors in relationships categorised as deteriorating were inexperienced, they had not at the commencement of this study supervised a PhD student to completion. For one of these supervisors it was his first PhD supervision. It appears that the combination of young students with questionable academic backgrounds and inexperienced supervisors does not produce successful supervisory relationships.

There was evidence that the relationship a supervisor has varies from student to student. Three of the supervisors in this study were supervising two students. The relationships that were negotiated by these supervisors tended to be different with each student. One supervisor had a fluctuating relationship with one student, and a professional, collegial relationship that improved and developed a personal component with the other student. This supervisor was male and both students were female. Another male supervisor had a fluctuating relationship with one student and a professional collegial relationship with the other. One of these students was male and the other female. A female supervisor supervising two female students had a fluctuating relationship with one and a friendship with the other. Gender influences did not seem to play a part in these differing relationships.

5.3.4 Summary

A good interpersonal working relationship between student and supervisor was important to almost all students and supervisors in this study. This has already been established by others (see eg, Elton & Pope, 1989; Friedman, 1987; Goulden, 1991; Harnett, 1976; Jacks et al., 1983; Moses, 1981a, 1985; Phillips & Pugh, 1987, 1994; Welsh, 1978; Wilson, 1980). However it was pointed out by some students and supervisors that this was not the purpose of the relationship, and the supervisor must make demands and push the student if necessary.

Most of the dyads in this study initially described their supervisory relationships as professional, collegial and with good interpersonal working aspects. Three dyads had personal friendships. Only one student said the interpersonal relationship with her supervisor was poor, her supervisor was unaware of this. A range of supervisory relationships varying from strictly professional to personal has already been reported (Acker et al., 1994; Moses, 1985). In the Acker et al. (1994) study, supervisors expressed a preference for a certain professional distance. Two supervisors and five students in this current study highlighted the dangers inherent in close personal supervisory relationships. Moses (1984) said that some supervisors were concerned about personal relationships with students and Heiss (1970) found that some faculty members were distrustful of students who wanted their adviser to also be a friend. It appears that students in the current study were more wary of personal relationships than the supervisors.

Changes occurred in the supervisory relationships for some of the dyads in this study. Four relationships improved, four fluctuated and four deteriorated. The ability to negotiate and renegotiate difficulties was a feature of fluctuating relationships. The importance of being able to negotiate agreement throughout the research period has already been identified (Taylor, 1976; Walford, 1981). The combination of young students with questionable academic preparation for PhD and inexperienced supervisors was evident in the deteriorating relationships. The reason for this is probably twofold. It is likely that young students with questionable academic preparation lack confidence and need more supervisory assistance; thus having greater expectations of their supervisors and the supervisory relationship. It is possible that the supervisor's ability to negotiate and renegotiate the supervisory relationship is learned and comes with experience.

An aspect that can have a serious impact on the relationships that develop between supervisors and students is the power imbalance between the two groups.

5.4 Power as a Dimension of the Supervisory Relationship

Supervisors generally acknowledged that there was a power imbalance between themselves and their PhD students. Representative comments follow.

There is a power differential... she's a student, I'm an academic. ... There is a little academic game going on here in a sense of you produce the thesis, we give you the paper ... You then are entitled to a job, a certain salary or whatever ... In that sense, I'm on the inside and she's on the outside. ... It would be naive to say there wasn't a power differential. ... it's one that I guess, I hope both to recognise and respect, not to exploit. ... I see it as a kind of facilitating role.

It is difficult for me to see how [student's name] perceives things because there's an in-built structural difference in our positions, that is, a power imbalance. ... There's always a power issue that underpins all these relationships.

It's obviously a very important dimension. You cannot get away from the power relationship.

An experienced supervisor in a senior administrative position highlighted that power was an issue for some students. She said that she had experienced:

people [students] endlessly coming to see me with horrendous difficulties where power was clearly an issue to such an extent that they would not even allow me to intervene to help ... because they were scared of the consequences.

Whilst acknowledging the existence of a power imbalance, most supervisors endeavoured to minimise it. They saw it as a question of expertise rather than power, or a relationship with a goal. They regarded themselves as facilitators who provided students with information, explanations and made suggestions. But the thesis belonged to the student. Representative comments follow.

Cannot get away from the power relationship, but it's something you should avoid in a research dimension, because the thesis is really the student's baby, and you're there to assist. So you've got to take a backward role if you can, while still being supportive, and not dominating. But power is always going to be a problem. ... Depends where you meet and how you talk to [the student]. ... what environment, how informed you are, how open you are. It's really an interpersonal dimension that's used. A lot of meetings have not necessarily been here [supervisor's office] they've been in more congenial spots over cups of coffee.

Give students alternatives rather than commands, suggest ways of doing things rather than instruct them.

Don't have a sense of power, rather facilitating thing [thesis], similar to parenting.

You have to look very carefully at what is the role of the supervisor. ... I have a very strong belief that we are here to educate. And this is the education establishment. If that is the case, then the student's benefit and welfare should come first. Once you set this scene, and if the student feels that is the case, basically you have a very good team. The student will work his guts out because it is for himself to get a PhD, to establish his skill and name in a particular area, and the supervisor is there to help.

Evans (1995) pointed out that supervisors needed a shift in perspective when they were supervising mature students with established careers. This shift necessitated dealing with students more as colleagues, and with different power and authority relations that were more equal. It appears that most supervisors in this study had achieved this shift in perspective, and not just for the older, established students.

A majority of students in this study were unconcerned about power. Fifteen of the 21 students said that power was not an issue for them within their relationships with their supervisors, although one of these students highlighted that some academics create power relations.

A lot of academics you deal with, you can feel slightly, kind of lower than them, ... you know intimidated, to a certain extent.

This student is one of the two students who chose their supervisor for personal reasons. Many of these 15 students gave reasons. Some of these reasons related to the supervisor, some related to the student and some were a function of supervisor-student interactions. These reasons included:

- Collegial and more personal relationships with their supervisors (8 students). A representative comment follows.

What diffuses the power thing is that it's not truly professional. We often, she often talks about her kids, and I often talk about mine. ... So our so-called student-supervisor meetings often have personal input from both sides. And I think that diffuses the notion of power.

- The personality of the supervisor; the supervisor was respectful and trust had grown (8 students). A representative comment follows.

He doesn't tend to put students down or look down his nose at you if you make statements that aren't on the spot. ... He treats you with respect.

- The age and professional standing of the student (5 students). A representative comment follows.

No one could bully me at this stage of my life.

- It was a question of expertise rather than power (3 students). A representative comment follows.

[Supervisor's name] is an internationally known And this gives him status that no one else has. He is not a power driven person.

- The personality of the student (3 students). A representative comment follows.

Very few people cause me threat because of my personality ... just washes off my back.

- Not competing or working in same area (1 student).

No because we are not competing, not working in the same area. It [power] might be an issue if we were.

- Democratic structure in department (1 student).

... don't perceive the power roles and structures within the department as strong as in other departments.

For three of the remaining six students, power was an issue for them at various stages during the supervisory process. One of these students said that power was an issue for her early on in the project, perhaps due to her lack of confidence in herself and her project. She said she was relying on her supervisor too much, and if her supervisor was late for an appointment or did something she was not happy about, she felt powerless because her supervisor was also the Head of Department. This student managed to assert herself with her supervisor and discuss the issues that were troubling her. Her supervisor was willing to listen and make the necessary adjustments and power was no longer an issue for this student. At the third interview she felt that she had made the transition with her supervisor from “student to junior colleague”. This is similar to the description by Bartlett and Merger (2000) of the journey transforming their supervisory relationship into a professional friendship. The student in this current study acknowledged that “the power differential is there, but it's how both the student and supervisor deal with it that is important”. This student's supervisor was aware that there might have been power issues early on in the supervisory relationship with this student.

Another student, in her first interview, said that, at times, power was an issue for her with her supervisor. She said she had some “interesting moments” in relation to power with her supervisor and that there was “a subtle game going on”, but she did not want to provide specific information. One year on, at the second interview, the matter was behind her. But by the third interview, problems had re-emerged. Her supervisor was either unaware of this or unwilling to discuss it during his third interview for this study.

The third student in this group initially said that power was not an issue for him in his relationship with his supervisor. He felt “quite confident” about the relationship. However, by the second interview, problems had arisen over the names on a publication.

It's been a bit of a roller-coaster ride ... One main event stands out and that is recently, literally two months ago, when I went to publish a document that I had produced at work, quite independent from ... [the university]. And my supervisor suggested that I republish it with his name on it. And I told him it was highly unethical. I put that in writing to him, or via e-mail. ... that it was an unethical procedure if he didn't contribute or couldn't defend the contents of a paper. ... He blew his stack at me ... won't go into the details ... raised voices ... fairly abusive.

The student involved the Head of Department, and the supervisor said he no longer wanted his name on the publication. The student subsequently reported a change in the power dynamics with his supervisor.

To be quite honest with you, and I'm not being immodest, when I came here I felt as though I was on probation. As far as I'm concerned he's on probation now. I'm serious.

This student's supervisor said that:

I declare to the students when they start off with me that any publications or papers that are published are to have my name on them, because I'll be supporting them, they'll be drawing on my financial resources ... also on my past intellectual property.

He also admitted to backing down over having his name on the publication and to changes in the power dynamics in his relationship with the student, but his perception differed from that of his student.

... as a result of this tiff. ... Yes I think so. I think so. ... I spent some time with him going over these models and everything. ... He's become

much more grateful and appreciative. ... I don't think he was aware of the contribution supervisors make.

It appears that the student's ethical stance over this particular publication is more in line with general thinking. Schiff and Ryan (1996) after a mail survey of advisers of Communication theses and dissertations that yielded 138 responses, found that the majority of respondents only considered it appropriate to list their names as co-authors of articles based on the student's research when they had helped write the article. In addition Schiff and Ryan (1996) cite the American Psychological Association's Ethic's Committee's guidelines as saying that "second authorship is unacceptable if the adviser merely provides financial aid, physical facilities, or periodic critiques of a student's work" (p. 24).

Two of these three students who had power issues at various stages of their supervision were in supervisory relationships categorised earlier in this chapter as fluctuating. The third was in a deteriorating relationship. A feature of these relationships was varying degrees of differences in the accounts provided by students and supervisors.

For the last three students, power was an issue for them throughout the supervisory process. For one of these students it was the PhD itself and her perception of her supervisor's expectations that was the problem.

In terms of power you are always aware that you have to come up with the goods, you have to perform, come up with good ideas. ... aware of that, and that puts you in a vulnerable position. ... think that [supervisor's name] has high expectations, perhaps higher than an ordinary supervisor.

This student was having difficulty coming up with a topic for her PhD and as time went on she felt pressure from both her department and her supervisor.

... power subtle ... being pulled in directions I do not want to go.

The student's supervisor was unaware she was experiencing such feelings. He saw her as "very intellectually able", with her own career and not dependent on him for job prospects.

The second student in this group said power was "definitely a problem" in her relationship with her supervisor. She said that her supervisor at times said things that sounded really bad to her:

about her being the supervisor and me being the student.

The student had never heard this before from anyone else. She complained that her supervisor was wielding both implicit and at times explicit power.

She just makes sure that there's a really big wall between us, so that I know I am the student and she's like my mother.

Interestingly this student's supervisor described supervision as "like parenting". She convened a committee because she was worried about the student's work²³. The committee exacerbated the student's feelings of powerlessness and she was seeing herself as "little me" and "feeling I was being crucified". The committee ended up concentrating on supervision rather than academic points, which resulted in a change of supervision for this student. Initially power was not an issue within her relationship with her new supervisor.

With [new supervisor's name] it's always just she's a person who does research, I'm a person who does research, and we're working on this together. And she's helping me because she's wiser and more experienced.

But this did not last. The student began to feel that her new supervisor had changed and that she was "pulling rank" and treating her "like a little undergraduate student or something". This student's original supervisor had only perceived an academic problem prior to the committee meeting, although afterwards she felt that perhaps the student had seen her as more powerful and she had not realised this. She wondered:

whether I have been on a kind of, not me personally in a sense but me as supervisor, on a sort of authoritarian pedestal or something? Maybe she [the student] actually ... maybe there was a power dynamic there from her point of view? But I hadn't really tuned into.

In 1969 Lowenberg described the transference regression of graduate students to earlier situations particularly in respect to authority. Heinrich (1995) in the previously referred to phenomenological study of the relationships 22 female students had with female dissertation committee advisers, found that a number of women gave accounts that revealed how they unconsciously transferred aspects of earlier relationships with mothering figures to their relationships with female advisers. It is possible that this was occurring in the above case.

²³ This was described earlier in this chapter in 5.2.3.

The third student who said that there were always power issues in her relationship with her supervisor was not comfortable to assert herself with her supervisor or ask him for anything. She believes that a difference in their personalities was the cause. She said she was “very timid and hesitant” whilst her supervisor was “very confident, talked fast and had quick ideas”. This caused the student to “back-off”. She had already had a change of supervision, which she said she was not consulted about. Her relationship with her previous supervisor, a woman, was similar, but not as bad. This student’s supervisor was concerned about his student’s academic progress and said:

... it's possible that the complex of some of these factors makes the fact that there is a bit of tension between us more stressful for her than it is for me. It certainly though is stressful for me because I don't like the situation. And it's difficult for me given my personality not to say to her, you bloody well better get on with it. I've tried to say that in a polite and reasonable way. But I don't like the fact I have to do that. In fact I'm very much looking forward to this whole situation ceasing.

One of the three students who said power was an issue throughout the supervisory relationship was in a relationship categorised earlier in this chapter as fluctuating. Another was in a relationship categorised as deteriorating, and the third was in a relationship categorised as professional with poor interpersonal aspects. A feature of all the relationships was varying degrees of difference in the stories provided by students and supervisors. Gender may have been a factor for one female student with a male supervisor. Her previous supervisor was female and she reported a better relationship with her. Cultural differences and severe language difficulties also existed for this dyad. The student was an international student. All three supervisors expressed concern about the academic progress of their students.

5.4.1 Summary

Whilst supervisors generally acknowledged that there was a power imbalance between themselves and their PhD students, most supervisors endeavoured to minimise it. This was acknowledged by most of the student participants in this study. For most, but not all, of the students in this study, power was not seen as an issue within the supervisory relationship. For three students power was an issue at various stages of the supervisory process; for a further three it was a constant problem. All six students and supervisors were categorised as having difficult supervisory relationships earlier in this chapter.

Accounts of events provided by students and supervisors tended to be different. The supervisors of the three students who said that power issues were a constant concern for them all expressed doubts about the academic progress of their students. It is possible that these supervisors were exerting power in an effort to increase their students' activity in relation to thesis work and progress.

Another factor that impacted on the relationships that developed between students and their supervisors was the supervisor's supervisory style. This will now be examined.

5.5 The Supervisor's Supervisory Style

Supervisors said that an assessment of the abilities, specific needs, personalities and motivation of their students was the main determinant of their supervisory style. This gave supervisors a perception of what students could cope with and do on their own. The stage of the thesis the student had reached was also an influence. Some representative comments follow.

It depends on the student. There are some students who determine the agenda rather than myself. There are others who need a lot of direction and who initiate that by coming in to see me almost every day ... It's an open door policy, I say whenever you need to come and see me do so. And between those two extremes there are other students who I say, okay, within two weeks time let's see if we can get this part of the chapter completed or whatever the case may be. So it depends on the student.

Supervisory style determined by perceptions of what the students can cope with; can do on their own. ... start out being open-minded and liberal, PhD student, deserves respect, self-motivated ... Sometimes works out. Other times it rapidly becomes clear that you need to supervise more closely. ... Continually reassessing it and monitoring it and saying is this the best way and if not what else?

If a student is very bright ... will leave them to their own resources. Whereas if a student is requiring more help ... spend heaps of time ... So it depends. It also depends on the student's commitment. If the student starts to relax on the commitment side ... will become a little more authoritative with them.

A second significant determinant of supervisory style for supervisors was the supervision they received during their own time as research degree students. Sixteen of the 18 supervisor participants in the study said that the supervision they had received

was a direct influence on the way they supervised students, although only five modelled their supervision on the supervision they had. A comment from one of these supervisors follows.

*... supervision excellent, different field but interested in topic ...
Outstanding supervisor because he was so dedicated to the supervision.*

Seven supervisors adopted what they saw as positive from their own supervision experiences and avoided those aspects that they considered negative. Some of their comments follow.

... if he was interested in what you were doing, he would be very involved in it. If he wasn't interested in it he would basically leave you alone. ... liked about my supervisor was that he was personally involved with his students. We would have lunch together on Tuesday every week ... some minimal touching of bases about research ... enjoyed this ... three students and supervisor ... didn't like ... after a year and a half he left ... did the rest of it [PhD] by myself. ... eventually assigned another supervisor who I had nothing to do with. ... had something like 15 PhD students.

... my supervisor was not as involved with my work. He tended to leave me to my own resources a lot more than what I tend to with my students. I tend to have a closer association with them. ... pattern after him [supervisor] to some extent ...

Four supervisors were dissatisfied with the supervision that they had received, and supervised their own students in a contrasting manner. Some of their comments follow.

... supervision experience was really nil. ... spoke on social occasions ... got on well. He didn't see supervision as teaching ... came from Oxford, and what he thought was that the student went away and wrote the thesis and brought it back. ... don't supervise this way ... like to see students very regularly and have them keep producing stuff [work] along the way.

Neither of them were much good on the question of research structure or thesis structure per se. So I'd say I've reacted against the kind of supervision I got.

... under-supervised by supervisor ... famous person who was in massive demand to supervise students ... tendency therefore to be difficult to get hold of for long enough ... can only see you for ten minutes and you wanted an hour and a half. And you'd leave him stuff [work] to comment on, and he'd write like one line comment on seven pages. And I'd say is there any more you want to comment on? And this then emerged in my oral exam. The external examiner essentially slagged off the supervisor for not supervising adequately.

Delamont et al. (1998) reported similar findings. After open-ended interviews with 94 social science and 32 natural science supervisors in a range of United Kingdom institutions, they found that supervisors “frequently construct their accounts using contrasts between the past and the present: comparing their own experiences as students with how they supervise now” (p. 157). In this current study four supervisors were “dissatisfied” and seven “somewhat dissatisfied” with their own supervisee experiences. Most of the supervisors in the Delamont et al. (1998) study thought they had been poorly supervised and were motivated to do better themselves. The phenomenon of being motivated to do better was apparent also in this current study. The end result found in both studies was more regular, systematic supervision. It appears that a supervisor’s own experience is a significant determinant in relation to a supervisor’s supervisory style.

Other factors that determined their supervisory styles for some supervisors in this study were their philosophies of supervision (five supervisors), their experiences and observations as supervisors (six supervisors), the project (one supervisor) and the community culture within the department (one supervisor). Some of their comments follow.

Not only is it about the student. You know you could say I’m only the supervisor, it’s got nothing to do with me, you know, you’re the one with the thesis to write and I’m just here to help you. I think there must also be a kind of investment or involvement on my part, which is no doubt complex. It’s to do with professional things like I want my students to get through, I want them to do well for their sake, and I’m sure also for mine. I don’t want to do a bad job; I want to do a good job, and to be seen to do a good job.

Philosophical idea not to constrain too much.

And I guess my standards are that you [PhD student] are showing me what you are doing, set your guidelines and keep in touch with me on your progress just in case I can assist you in being more efficient in the way you get there.

It’s [supervisory style] not something, which is explicitly grounded in a theory of supervision that I have thought about or studied. But it is fairly solidly grounded, albeit in a rather intuitive way, in my experience and in my ideas about what research students need.

I have always been tremendously impressed by the feeling in this department that there is a sense of responsibility to students.

In summary, supervisors said that the main determinant of their supervisory style was an assessment of their students' specific requirements and needs. In addition, the stage of the thesis the student had reached, how they themselves were supervised, their philosophies of supervision and their experiences supervising students all affected the way they went about supervising students.

The supervisor's supervisory style includes such things as the amount of direction a supervisor provides a student with in relation to the research, how closely the supervisor supervises the student's research and the frequency of supervisory meetings.

5.5.1 The Amount of Supervisory Direction

During the first interviews for this study 14 of the 21 student participants classified their supervisor's supervisory style as "non-directive". Comments from some of these students follow.

Helpful, but not directive. But early on, don't know how directive ... if I hit a brick wall.

Very non-directive, doesn't even suggest, throws it back onto you.

As far as my project goes, I've set it up, I've arranged the experimentation. He only knows little details of the actual work I'm doing.

Makes suggestions rather than directive.

Reasonably hands-off. He basically leaves it up to me ... provides guidance ... when I ask for it.

The supervisors of these students generally saw themselves as providing more direction than their students did. Only six of the supervisors of the 14 students who described their supervisors' styles as "non-directive" agreed with this description. Representative comments from two of these six supervisors follow.

... as a sounding board ...

... tend to stand at the side lines ...

The supervisor of two students who said that their supervisor's style was "non-directive" said it depended on the student. Another supervisor said that the direction comes from a clearly defined project. The remaining five supervisors said that their supervisory styles were "reasonably directive". One of these supervisors complained

that the student ignored his directions. Comments from some of these supervisors follow.

Fairly directive in this case because she needs it.

Gentle prodding to get those things done which will help him along the way.

... have been quite directive with [student's name] ...

There are no apparent reasons for these differences of opinion. Two dyads were from the Arts Faculty and three from the other faculties. Three were in supervisory relationships categorised as good, one in a relationship categorised as poor and one a relationship categorised as deteriorating²⁴.

The other seven students said that their supervisors had a “reasonably directive” style. None of the student participants saw their supervisor’s style as “directive”. There was general agreement from their supervisors on this point, although, again, the supervisors saw themselves as slightly more directive than the students did, particularly if there was a problem. Seven students agreed that their supervisors provided more direction if there was a problem and direction was needed. A student who saw her supervisor as having a “reasonably directive” style said:

It's just comforting to know that she's not going to let me go through with ... big loop holes and gaps that I don't know anything about. And she's not going to direct the argument, but she will make sure my argument won't have any flaws, major flaws in it.

Supervisors generally reported variations over time in the amount of direction provided to students. These changes could be student-related if the student was experiencing a problem, or related to the stage of the project. Five supervisors said that they provided more direction in the first six months or so to get the study established. Representative comments from two of these supervisors follow.

... when a student first starts, you have to keep a closer eye. ... need to get focused. Once they reach the focus point when they know what they are doing, then the supervisor can sit back and let them develop. ... and then from time to time make sure it [the project] is on track.

²⁴ This categorisation of supervisory relationships occurred earlier in this chapter in section 5.3.

With all students, initially in the first six months or so, you really do a lot of supervision because you've got to establish the study and work out with them what they want to do. In some cases it could take longer than that.

These five supervisors were all from the other faculties. Two supervisors from the Arts Faculty took the opposite position. They provided less direction early on so that the students could establish what it was they wanted to do. Once the students established this, more direction about how to achieve it was provided. Two supervisors, one from the Arts Faculty and one from the other faculties, provided more direction towards the end of the project when they were editing the theses.

As presented in the literature review, Welsh (1978) identified three methods of supervision from interviews with supervisors. These were highly directive initially until students found their feet (similar to the other faculty supervisors in this current study), directive in the initial and final stages of the research, and directive throughout the research period. After interviewing students Welsh (1978) identified another method of supervision, that is, the non-directive method. Over half the students in the current study categorised their supervisor's style as "non-directive". It appears that supervisors and students perceptions regarding supervisory style differ to some extent.

More recent research reveals that in the social sciences there is initially high supervisory involvement, followed by a detached phase, then greater supervisor involvement regarding critical reading of drafts (Burgess et al., 1994). Pearson (1996) also identified a bi-modal pattern of supervisor involvement, with an increase in writing assistance as the candidature progressed. Evidence from the natural sciences (Pole et al., 1997) demonstrates that a similar pattern exists, at least in relation to the degree of supervisory involvement in the early stages.

Hockey (1996b) after in-depth interviews with 89 social science PhD supervisors, and acknowledging that the situation was more complex, found that two general overarching strategies existed. These were a relatively unstructured approach giving students a large degree of freedom, and a much more structured approach that was managed by the supervisor. This is similar to the finding of Acker et al. (1994). Reasons advanced for

the less directive approach in the Acker et al. study were that it is the student's PhD and supervisors did not want to impede students' creativity.

The above descriptions of patterns of supervisory direction do not account for the two Arts Faculty supervisors in this study, who provided less direction early in the research so that students had creative space to establish what they wanted to do. Once students established this, more direction was provided in relation to how to achieve this.

One supervisor in the current study said he was becoming more "interventionist" with his students because of university policy:

... university standard of how long they've got is shortening all the time and I feel that I'd be doing them a disservice ... communicating that and in fact made it seem that I expected the same as the university.

One suspects that this supervisor is troubled by the university policy.

... the learning program which a PhD is, is partly an extended period of independent learning, and partly a period of creative and productive research of an independent kind, as well as involving certain degrees of originality and flair on the part of the candidate; ... is in any way assisted by being set into the straight jacket of a shorter time period. In fact ... it is likely that the independence of the research will suffer under these conditions. And that certainly the quality of the creative research endeavour will suffer from that. ... reasons for shortening the periods of candidature have anything to do with pedagogy or education. ... everything to do with economics.

This supervisor also became slightly more interventionist with his student who was participating in this study. He considers this student to be a very self-directed candidate and very strongly motivated in his work. To some extent the student perceived the slight increase in intervention by his supervisor.

Others (Acker et al., 1994; Delamont et al., 1998; Hockey, 1995, 1996b) have also identified this phenomenon of increased supervisor intervention and direction because of a changing context and policy emphasis on decreasing completion times and increasing completion rates. Like the supervisor in this current study, a supervisor in Hockey's (1995) study said that he was now adopting an "instrumental" attitude rather than an "intellectual value" attitude, and that he found the approach made supervision less satisfying (p. 201).

One student said that there had already been adjustments in the amount of direction provided by her supervisor prior to the first interview. She said her supervisor was initially taking a back-seat position. She would produce ideas and work, and they would then discuss these. Then her supervisor took over the ideas, and tended to take off “too far too fast” for the student. She became overwhelmed and distressed. The student discussed what was happening with her supervisor who made adjustments. The student said it was “more of an equal relationship now” and that they were “working jointly on a project”. The student much preferred her supervisor’s style after the adjustments.

Four other students described changes in the amount of direction given by their supervisors over the course of their research. Two students, who described their supervisors as “non-directive” initially, later described them as “reasonably directive”. One of these students said that her supervisor’s style provided more direction when some hard decisions had to be made, and the other as her thesis headed towards the final product. The other two students who initially described their supervisors as “non-directive” said that their supervisors provided even less direction over time. One said that this was because the project was set up and his supervisor could see that he knew what he was doing. The other said her supervisor backed off even further because he could see that any pressure at all overwhelmed her.

There were no apparent differences between the Arts and other faculties in the initial reports by the students regarding the amount of direction provided by supervisors. However, both the students who reported an increase in the amount of direction were in the Arts Faculty. One of the two students who said that their supervisors provided even less direction over time was from the Arts Faculty and the other was from the other faculties.

In summary, most of the student participants in this study regarded their supervisors’ supervisory styles as “non-directive”. The remainder said “reasonably directive”; none said that they had supervisors with “directive” styles. The supervisors generally believed that they provided more direction than was attributed to them by their students. There was general agreement that supervisors tended to provide more direction when there was a problem. The only disciplinary difference detected regarding the amount of direction provided by supervisors was that some supervisors from the other faculties

said that they provided more direction early in the supervisory process to get the project developed. Some Arts Faculty supervisors said they provided less direction early in the process to enable the students to establish what they wanted to do.

Although students generally regarded their supervisors' styles as fairly "non-directive" unless there was a problem, several students felt that their supervisors supervised "closely". Closeness of supervision means the supervisor's awareness of exactly which problems the student is working on and what the student is doing. The students' comments about their supervisors' styles in relation to closeness of supervision will now be presented.

5.5.2 The Closeness of Supervision

During their first interviews eight of the 21 students described their supervisors' supervisory style as "close". Only three of their supervisors agreed fully. Three of these students' supervisors saw their supervisory styles as "reasonably close" rather than "close". Another supervisor who was supervising two of these students said the closeness of his supervision varies from student to student. Comments from some students who said their supervisor supervised closely follow.

Knows every step I make.

Knows exactly what I'm doing.

Likes to know what's happening. ... Keeps a close eye on what I'm doing, but not interfering.

Supervises closely, involved ...

A comment from a supervisor who agreed that he supervised closely follows.

I think I tend to be a fairly intrusive supervisor. I don't think it's fair to a student to let them go away and to do their own thing and then come back, and you know, twelve months later with a finished, half finished product or something like that. And I do expect students to let me know what they've done and how they are getting on very regularly. And I want them to know that they can expect me to be available to them, and to help them.

Comments from two of these students' supervisors who saw their supervisory styles as "reasonably close" rather than "close" follow.

... supervise fairly closely ... have to keep an eye and see how things are progressing, but without interfering. That is the balance one have [sic] to achieve.

... supervisory style with [student's name] relatively close at this stage.

Four students said that their supervisors' supervision was "reasonably close". Three of their supervisors agreed and the fourth student's supervisor thought he supervised closely. Comments from some students who said that their supervisor supervised reasonably closely follow.

Medium range closeness.

...wants to see work regularly. ... keep in touch regularly.

The remaining nine students said that supervision was "not close". Seven of these students' supervisors agreed with this. Students who said that their supervision was "not close" commented:

Doesn't supervise very closely ... wouldn't let him. ...prefer it that way.

He gives you free reign a lot of the time.

I have the impression that he is very busy, so ... no time for, always in a hurry.

... pretty content to just assume that things are going along ... When I've got something to discuss ...I can bring it in.

I can count the number of hours I've had in conversation on perhaps two hands.

With a PhD you're supposed to be able to track it yourself.

Comments from some of these students' supervisors who agreed that their supervision was "not close" follow.

... student has access to a trained mind to test out her ideas.

... tend to stand at the side lines. ... those that are able to cope, then I tend to stand back and leave them with their own resources.

... supervise quite remotely. ... believe that is what a supervisor should do.

For the remaining two students who said that their supervisors did not supervise closely, one student's supervisor said he monitored her "fairly closely". This student and supervisor were in a relationship categorised as fluctuating. The remaining student's supervisor said he supervised her "closely". He said he did this because of her slow

progress and thinks it is the only way she is going to get anywhere. This student and supervisor were in relationship categorised as poor²⁵.

As with the amount of direction provided, most supervisors reported changes in the closeness of their supervision relating to individual students' needs and the stage of the project. Several students reported changes in the closeness of their supervision over time. One student, who initially described his supervision as "not close", said at the second interview one year later, that his supervision had become even less so.

Perhaps more hands off.

However, by the third interview another year later, this student said his supervision had become closer and that he had received some very valuable advice regarding draft chapters. Another student who originally said his supervision was "not close" reported changes. A year later he said his supervisor was really interested in his work and read it very carefully, providing lots of notes and comments. The supervisors of both these students reported similar changes. Two other students who initially described their supervision as "reasonably close" later said it was "not close". In part this was because their supervisor had become increasingly busy.

A couple of times when I sort of have asked she's been really busy and about to go off and do other things and it really hasn't happened.

There is a potential log jam ... simply because [supervisor's name] has so many students ... she possibly has actually too many.

In summary, eight students described their supervisors' supervisory style as "close"; most of their supervisors did not agree that they supervised closely. A further four students saw their supervisors' styles as "reasonably close" and nine as "not close". There was greater supervisor agreement with these estimations. Both supervisors and students reported changes in the closeness of supervision related to the stage of the project and individual student and supervisor needs. Some students said that supervisors' heavy workloads affected the closeness of their supervision.

²⁵ These categorisations occurred earlier in this chapter in section 5.3.

There do appear to be differences in the closeness of supervision provided from supervisors in the Arts Faculty compared with supervisors from the other faculties. Five of the nine students from the other faculties described their supervisors' styles as "close". Only three students out of 12 in the Arts Faculty said that their supervision was "close". Most of the Arts students described their supervisors' styles as "not close" (six out of 12), or "reasonably close" (three out of 12). All students reporting changes in the closeness of their supervision were from the Arts Faculty. This is different from the supervisors' responses to question six on the RPRS; these were presented in 4.4.5.2. Arts Faculty supervisors were more inclined than other faculty supervisors to say that the supervisor should always know what the student is working on.

5.5.3 An "Interactive" Supervisory Style

Rather than describe their supervisors' supervisory styles by the amount of direction or the closeness of supervision, the students in this study were more likely to describe their supervisors' supervisory style as "interactive". "Interactive" includes guidance, advice, suggestions, discussion, negotiation and support. In most cases the students felt that the final decisions about the research were theirs. Sixteen of the 21 students described their supervisors' style as interactive. Seventeen of the 18 supervisor participants described their own supervisory styles as interactive. For one student and supervisor, neither saw the supervisor's style as interactive. This leaves four supervisors who regarded their supervisory style as interactive, but whose students did not. Some of the students who described their supervisors' styles as interactive commented:

... very supportive and constantly throwing new ideas and new information. But he's offering it rather than pushing it.

It is as much a matter of skill as anything else. One would hope to be able to communicate and negotiate to a point ...

He's very easy going on one level in that he tries to sort of get me to come up with what I want to do ... And at the same time, he will suggest things to me. ... tell him if the idea doesn't suit.

... discusses issues ... and negotiates outcomes.

It appears that this interactive supervisory style is very important for students in the maintenance of a good interpersonal working relationship with supervisors. The five students who said that their supervisors did not provide this interactive supervisory style reported relationship problems adverted to in a previous section of this chapter. Four

reported supervisory relationships that were categorised as deteriorating and the fifth a sustained poor relationship. These five students complained that their supervisor's style did not suit them. Their comments follow.

No dialogue about theory, ideas, relevance ... made appointments to see [supervisor's name] and she just wouldn't be there ... happened about five times ... didn't return written material.

The problem with [supervisor's name] is that she expects me to take her advice verbatim. ... would like more discussion and negotiation in disputed areas.

Style [of supervisor] doesn't suit ... I know that I have to work by myself ... it would be helpful for me ... if he has some article that can help me ... to make me aware this.

He [supervisor] probably had a tendency to be a little bit critical at times which wasn't good for the confidence. But again that's inexperience.

In one word minimal. ... I suppose it's up to me to be more active as a student and push him into assisting me when I need it. ... He's the sort of supervisor that would say encouraging remarks when you told him what you'd been up to ... but ... he wasn't really interested in taking the time to actually look at the cold, hard numbers and the details and such is the case even today. ... I think at the end of the day with an academic that supervision is the easiest thing to let slip a little bit.

The supervisors of three of these students expressed concern regarding their student's progress.

Other concepts some students introduced about their supervisors' styles were relaxed/creative space, trust, respect and demanding/perfectionist. Five students said that their supervisor's style was relaxed and provided creative space for them. Four of these students were in the Arts Faculty and one from the other faculties. One student's comment follows.

The creative space that is allowed by [supervisor's name] supervisory style is a delightful thing. ... it's very rare. ... the dynamics of anxiety I think in a supervisory relationship are possibly almost as important as the dynamics of power. And negotiating between the fact that you know that at the end of a period of x or y you've actually got to have something to hand in, while on the other hand making sure that you've left enough space so that creative thought can occur. ... if you go too hard down the road of this is research training and there are steps 1 to 25 that you follow, the danger is that creative thought can get really quite sadly lost along the way. so it's always going to be a balance.

Two students articulated the importance of trust:

Needed to set up trust ... did this ...

So now there's some trust and faith ...

Both of these students were in good relationships with their supervisors that were categorised as improving further. Another two highlighted the importance of respect:

Respect is an important component of the supervisory relationship. Just that someone will listen to you if you've got a problem.

I don't have the respect for the man that I should have being my PhD supervisor.

Both of these students were in relationships with their supervisors that were categorised as deteriorating. One felt that she did not have her supervisor's respect whilst the other had lost respect for his supervisor for reasons related to his supervisory style. Another student described her supervisor's style as "demanding and perfectionist".

Demanding and perfectionist. ... can't present junk or drafts without having done enough work. ... will ask for work if it's not forthcoming ... pleasantly.

Other ways in which some supervisors described their supervisory styles included being relaxed, informal and friendly, and keeping an eye on part-time students. Eight supervisors described their styles as relaxed, informal and friendly. One of these pointed out that this did not mean being indulgent. The student of one of these supervisors did not agree that her supervisor was relaxed, informal and friendly. This student wanted a more personal way of relating with her supervisor. She felt this was not available to her. Another student felt his supervisor's supervision was so casual that it was almost non-existent, and he was dissatisfied with his supervisor's style. This supervisor was concerned regarding his student's perception of his style; matters came to a head during an argument over names on a publication.

What did come out of the exchange between [student's name] and myself was his perception of me, and my role in assisting him, and it concerned me greatly, his perception of how I supervise him. And he felt as if he was being short-changed all the time with regards to contact with me, with regards to how much I should provide assistance to him and that sort of thing. And it flawed me. It really caught me off guard. Because a lot of students that I supervise, if I see that they're going along okay, then I tend to let go and just let them go along by themselves, and let them do what they feel is appropriate, because after

all its supposed to be independent research. It's not supposed to be hand-held research.

Both of these dyads were in relationships categorised as deteriorating. Three supervisors articulated the importance of keeping part-time students focused on their theses. All were supervising part-time students. The comments of two of these supervisors follow.

The main thing is, particularly with part-time students, is keeping their eye on the thesis. ... easy to get caught up doing all sorts of other things. If you are in a non-academic job, you get caught up with that. Even in an academic job, you get caught up with teaching and administration. Big issue. Supervisors have to keep part-time candidates well and truly focused on what's going on.

You have to sort of keep the person going through and progressing, particularly for a part-timer. Part-timers, since they're not continuously confronted with other students working in the area, and since there's so many pressures on them from outside, need to be very focused. ... You're always going to have a problem with part-time students because they've got other commitments.

In summary, 16 of the 21 student participants in this study described their supervisor's supervisory style as "interactive". "Interactive" includes guidance, advice, suggestions, discussion, negotiation and support. This interactive style was found to be very important for students in the maintenance of a good interpersonal working relationship with supervisors. The five students who said that their supervisors did not provide this interactive supervisory style were in supervisory relationships, categorised earlier in this chapter as deteriorating or poor. The supervisors of three of these students had expressed concern about the student's progress. Other aspects of supervisors' supervisory styles valued by students were the provision of creative space for students, and the development of mutual trust and respect. Supervisors saw being relaxed, informal and friendly as important; some students said that their supervisors did not achieve this. Keeping part-time students progressing with their thesis work was important for three supervisors who were supervising part-time students.

Related to the amount of direction, the closeness of supervision and other matters pertaining to the supervisor's supervisory style, is the frequency of meetings between the student and supervisor. The initiation and frequency of supervisory meetings will now be presented.

5.5.4 Supervisory Meetings

At the time of their first interviews for this study, nine of the 21 student participants said that they met formally with their supervisors about their PhD more than once a month. Four of these students had informal meetings as well. Eight students had formal supervisory meetings about monthly, one of them also met informally with his supervisor about weekly. Three students met with their supervisors at longer than monthly intervals. One student only had supervisory meetings when needed.

As with the amount of direction and the closeness of supervision, there were some changes in the regularity of meetings. Two students who initially met with their supervisors more than monthly said that their meetings began to be more infrequent. In one of these cases the student's supervisor became very busy and the student learned to function more autonomously. In the other instance the part-time student had a new job and was busier at work. Four other students changed their supervisory meetings to when they were needed rather than having them regularly. Two of these students initially had monthly meetings; the other two met more frequently. In two cases the reason was that the students were writing up their theses and they had supervisory meetings as needed to discuss sections of their written work. With the other two, their progress was spasmodic and they had meetings when they had something specific to discuss.

Three students commented that they had difficulty organising meetings because their supervisors were so busy. Their comments follow.

I would like a bit more contact. ... It's hard to set it up. A couple of times when I ... have asked she's been really busy ...

... difficulty making an appointment because a number of her other students who are near to completion have presented her with a large volume of work to read.

My one criticism of my supervisor is that I come down here once a week on Fridays. And I'd like to see him for at least 15 minutes. ... this is kind of where I'm at, and just make him think about me for 15 minutes. ... the last few Fridays it's been ... I'm too busy, next week. ... He's got to commit some more time.

Two of these students planned to pin down their supervisors to regular one-hour appointments, one fortnightly and the other every three weeks. Acker et al. (1994) found that student complaints were more often about supervisor accessibility than style.

Supervisors' perspectives and comments regarding time for supervision will be presented in Chapter 6.

Another student expressed his regret that he had not had regular monthly meetings. This student withdrew from candidature in good standing. He had initially reported meeting with his supervisor less than once a month.

Two students complained that their supervisors did not attend scheduled meetings. For one of these students this happened three times, for the other about five times. The lack of quality time for supervision also worried one of these students.

The problem is that when you sit in his office his phone's ringing flat out. Other students are coming in. ... want some uninterrupted time ...

Concern about interruptions to supervisory meetings was also identified in the Pole et al. (1997) study. Two students in this current study said that their supervisory meetings were held outside the university specifically to avoid interruptions.

As with the closeness of supervision, there appears to be slight faculty differences with the frequency of meetings. Five of the nine students from the other faculties met more frequently than monthly. In the Arts Faculty, by comparison, four of the 12 students met more frequently than monthly. A further five met monthly. Only one student from the other faculties had supervisory meetings at longer than monthly intervals compared with two from the Arts Faculty. The student who only had meetings when needed was from the Arts Faculty. Also four of the five students who said that they met informally with their supervisors, in addition to the formal supervisory meetings, were from the other faculties. As would be expected, full-time students met more frequently with their supervisors than part-time students. Eight of the 13 full-time students had supervisory meetings more frequently than monthly, four about monthly and only one less frequently than monthly. Only one of the eight part-time students had supervisory meetings more frequently than monthly and this frequency decreased over time. Four part-time students had monthly supervisory meetings, two less often than monthly and one only when needed.

Seven of the 21 student participants said that they usually initiated supervisory meetings. Four students said that meetings were generally mutually arranged with their

supervisors. Three mostly met with their supervisors after they submitted written work and their supervisors arranged a meeting after they had read it. For the remaining seven students, a combination of the above means of initiating meetings was employed. One student was very upset that her supervisors did not phone her when she was unwell. This student had a change of supervisors because of a relationship breakdown with her first supervisor. During her supervision with her first supervisor, and subsequently with her second, she had periods of illness. The student thought her supervisors should have telephoned her to see how she was. Neither did. This student wanted a more personal rather than purely professional relationship with her supervisors. There were no apparent faculty differences regarding the initiation of supervisory meetings.

In summary, at the time of their first interviews for this study nine students had supervisory meetings more frequently than monthly, eight about monthly, three less frequently than monthly and one as needed. There was evidence of slight disciplinary differences, with the students from the other faculties meeting with their supervisors more frequently than the Arts Faculty students did. Also full-time students met with their supervisors more frequently than part-time students. Changes over time in the frequency of supervisory meetings were reported because of student, supervisor and project issues. A variety of mechanisms were used to initiate meetings.

Supervisors in this study raised the issue of changing their supervisory style with different students. Supervisors' opinions and the evidence from students' reports regarding whether this occurred will now be presented.

5.5.5 Different Supervisory Styles for Different Students?

Seventeen of the 18 supervisors participating in this study claimed that they tailored their supervisory styles to individual students and had different styles with different students. Four supervisors acknowledged that they could only go so far with this. Some of their comments follow.

It's a bit like a good marriage, you work at it. And if you don't work at it of course you never become well matched. And you do have to adapt, and you do have to adjust. And you have to just check out what sort of person you are for this student. ... Need to adjust style so that the other person is comfortable. Part of what you're there for, there to facilitate their work, not to make them miserable.

My supervisory style tends to be intrusive, bit of a slave driver. ... have to adapt style because students are different.

... every student is different and every supervisor is different. And I think the supervisor has to change his role depending on the students.

You've got to read the people [students]. ... style determined by an assessment ... is best to do for a particular person. Horse for a course.

Different decisions for different students. Each student is different and what comes out of this [interview] is true for this student, but is not true for all [his] students.

It depends entirely on the student. Supervision is a very one to one relationship.

Three supervisors explained that they are supervising the students participating in this study less closely than their other students. One supervisor is supervising his student participating in this study more closely and giving more direction than he does for his other students. Another supervisor said his student in this study was his most problematic student and that it was a difficult supervision. He said he was constantly adjusting his style with this student in an effort to satisfy him.

Only one of the 18 supervisors in this study said he does not change his supervisory style much with different students:

Not much, although I certainly adjust the suggestions I make to them and the things I ask them to get a move on with, according to what seems necessary in particular cases.

Despite 17 of the 18 supervisor participants in this study saying they tailored their supervisory styles to individual students and supervised students differently, the evidence from this study is that this was not always successful. Six of the 21 student participants in this study were not satisfied with their supervisor's style and said that there was little if any adjustment of their supervisor's style to meet their needs. In one case, where the student and supervisor had a number of disagreements over the supervisor's style, and the supervisor promised to provide closer and more hands-on supervision, this did not occur according to the student. Things improved for a short time after each disagreement, then reverted to what this student described as "minimal"

supervision. Four of these six students were in relationships that were categorised as deteriorating²⁶. The other two relationships were categorised as professional, one with good interpersonal aspects, the other with poor interpersonal aspects. Only one of the students in this dissatisfied group described his supervisor's supervisory style as interactive. His complaint was that his supervisor should have provided more direction and supervised him more closely. He accepted part of the responsibility for letting this happen.

The other evidence regarding supervisors changing their styles with different students came from the dyads where one supervisor was supervising two students. It will be recalled that three of the supervisors in this study were supervising two students. As to the amount of direction given to students by these supervisors, both students with one supervisor described their supervisor as "non-directive". In the other two cases both students described their supervisor as "reasonably directive". In all three cases both students with the same supervisor described the same supervisory style in relation to the amount of direction provided by their supervisors. It was the same in relation to closeness of supervision. Both students with one supervisor described that supervisor's supervision as "reasonably close". In the other two cases both students described their supervisor's style as "close". The only difference occurred in relation to the frequency of meetings. The two students with one supervisor both reported about monthly meetings. However, the students with the other two supervisors reported a slight variation in the frequency of meetings.

In summary, all but one of the supervisors in this study said that they tailored their supervisory style to individual student needs, and had different styles for different students. There was some evidence in this study that students perceived this as not occurring. Six students, who were dissatisfied with their supervisor's style, said that there was little if any adjustment of their supervisor's style to meet their needs. As well, when three supervisors were supervising two students, both students described the same style regarding the amount of direction provided and the closeness of the supervision. There were minor differences in relation to frequency of meetings. It appears from the

²⁶ This occurred earlier in this chapter in 5.3.3.3.

evidence that supervisory style may be more ingrained than supervisors realise, and, whilst there is a willingness to change their supervisory style with different students, it is only possible to do so within limited parameters. Wright and Lodwick (1989) also found that some supervisors have their own style of supervision, which they apply to all research students. This is contrary to a finding by Acker et al. (1994). They interviewed 67 students, 56 supervisors and 14 key persons in two disciplines (education and psychology) in three United Kingdom universities, and found that supervisors adapted their preferred style to circumstances.

The question of whether supervision is teaching, and should to be incorporated into the supervisor's supervisory style, arose with many of the student and supervisor participants. Their opinions about this will now be presented.

5.5.6 Is Supervision Teaching?

Six of the 21 students in this study said that supervision at PhD level involved teaching. Two of the six had an atypical educational preparation for PhD studies; another had a second class honours degree. Four of the six were having various academic difficulties with their studies. Two were academic staff members. Comments from some of these six students follow.

Teaching element in it, particularly in the early days of the research. Even if not teaching about subject matter, teaching about the way you go about it. Not teaching in the classroom sense, but an element of teaching.

See supervision as a teaching-learning process, and the process is more important than the content. Teaching as part of the process is important.

See the supervisor's role as not just teaching about knowledge, but also the ways to access new knowledge and information. ... to keep the student aware of what is happening within a department and around the field they're working in; and to also teach them how to be a good supervisor and teacher once they get to that level.

Supervisor has to understand area, or not appropriate supervisor, and then guides' student. When you teach you guide, suggest directions to follow etc.

Seven students said that PhD supervision did not involve teaching, although one commented that, ideally, it should. Some of their comments follow.

Not at all. Ideally it would be. Teaching has that connotation of didactic ... Ideally it would be a process of developing a thesis with that sort of

learning from somebody else, or gaining insights from somebody else, some direction. ... might relate to the process of working or the knowledge area of what you're doing.

No, it's direction. ... don't see a supervisor as someone who provides information. It's purely direction. It's up to the student to go and look for the information.

No it is something more than that. The supervisor should give you an idea about the project management, project planning. And then with research you always get stuck at some point, ... the supervisor should be able to give you advice to direct yourself out of it. Another thing is that at the same time two people could be working on the same lines, the supervisor should be able to help you divide from his lines so you are doing something original. More problem solving than teaching.

Not really. ... the way it's been in my personal experience is, it's more that I'm essentially presenting the work, and it's more a discussion of presented work rather than an actual teaching process where ideas or whatever are presented to me. Collegial work collaboration rather than a teaching-learning process.

The first student who commented above was not matched theoretically with her supervisor; she had chosen him for personal reasons. She answered the question about supervision incorporating teaching in relation to this current supervisory relationship. But she added that, in the supervisory relationship she had with her undergraduate supervisor, she had learned a great deal.

Seven students said "yes and no" to supervision being teaching. The remaining student was never asked the question because he withdrew from candidature between the first and second round of interviews for this study. Supervision as teaching was a subject that arose with some participants in the first round of interviews and therefore was incorporated into the second round of interviews as a specific question. Comments from some of the students who said "yes and no" follow.

Yes and no ... teaching how to actually develop and go through a process, a project of that size. But the actual content of the PhD and the actual development of the ideas, it's much more guidance.

In a way. Come into a field that you don't really know about. Indirect teaching, no blackboard, no chalk, but what the supervisor says if you really listen is teaching.

Yes and no. ... teaching-learning process whereby the supervisor and student are learning from each other. ... not a formal teaching situation for the supervisor, ... an informal instructional process.

Not consistent enough to be teaching. ... show [supervisor's name] something, and get something back, ... learn things ... from suggestions. ... learning, although not in a didactic way. ... Not teaching of philosophical position.

Hadn't thought of it in that way, but in some ways it is. Teaching of research technique; teaching component in it.

Both teaching and guiding role in the supervision process.

There were no apparent faculty differences regarding whether students saw supervision as teaching. One student described a problem some of her friends were experiencing. These friends had gone straight from school to university and didn't know how to start or go about doing their PhDs. They were not getting the teaching that they needed from their supervisors.

The supervisor participants in this study were more inclined to see teaching as part of the supervision process than their students did. Ten out of 17 supervisors saw supervision as teaching. The issue did not arise with the 18th supervisor because his student withdrew from candidature after the first interview and before the question of teaching was broached. Comments from some of the supervisors who said supervision included teaching follow.

Absolutely yes ... because they come out of, I mean wherever they come from, they've usually not written a thesis before. ... they haven't done a PhD before or you know whatever thesis it is that they're doing. They haven't done that topic before. And it's no good imagining that they are just going to go off and somehow do it by osmosis. I mean they actually do have to be provided with materials. They have to be told where to find the materials. They have to be given a lot of advice about what to read in the first year. Some of them have to be taught how to structure an argument. You know of a long, I mean they can usually do it in 3,000 words, but you ask them to write 10 and see whether the argument's still there at the end. ... Some of them ... need help with the actual writing itself. Some of them when they first start to write have actually never been made to think about what writing is and how it works at undergraduate level. They'd done it reasonably well and so nobody's ever commented. But then problems come up at this level that they hadn't anticipated. So you've got to teach them every little ... So it is a form of teaching.

Supervision enables you to do the kinds of things that universities used to do. I mean like the Oxford tutorials where there is only one person, where you've got a one to one relationship. ... Plato taking his students for a walk around his gardens academia. Now that's something we don't, we've lost that plot; we've lost lots of plots. Universities are now

about making money, not about teaching and research and scholarship. But we develop a scholarly relationship and scholarly methods between a more experienced academic and a developing academic. ... still possible within supervision, particularly PhD supervision. Somehow you're able to pass on a little bit of your own academic life experience in a way that you're not lecturing someone. Interacting with them in a range of issues that they're interested in.

... teaching component in there. And probably we should be more explicit about what that teaching component is. ... teaching element as to how one thinks, analyses, writes. Not didactic, but through exchange, teaching.

... see teaching as the process of communicating skills and understanding and knowledge from someone who has that to someone who wants that. And that's exactly what, how I've described the process of postgraduate supervision. Not teaching subject area ... teaching them how to be an academic, how to write papers, how to structure research in a solid and robust manner, how to deal with issues that come up in basically searching through the unknown.

In various respects it's a much more focused and interactive kind of thing even with a relatively weak student. ... And with a student who's stronger, it's like cooperating with a colleague. But there's nevertheless an element of teaching in it.

Yes ... have an old fashioned but radical view that the best way to teach all students is to teach them one on one. ... All students improve, the good ones get better, the weak ones become average and the average become good. It's amazing ... For social and structural value small group teaching is okay, overdone apart from that. Not small group any more. Impossible because of budgetary reasons, but if you want students to learn, one on one, that's how they'll learn.

You've got to teach them time management, you've got to teach them how to coordinate their thoughts, and you've got to teach them how to write. ... Most of this is self-learning, you're just guiding them to doing it. And that's probably the difference between PhDs and traditional undergraduate. Undergraduate is we lecture and you take it in. PhD is you guide and direct. And I see that as teaching.

Four supervisors said that supervision did not incorporate teaching. Their comments follow.

No. ... the person being supervised is engaged in actual research, trying to get to the frontiers of knowledge, trying to get to the point where there isn't anyone else in the world who is actually in a position to teach him.

Not really ... I'm not teaching them how to do research, I don't teach them how to do that. ... I advise them, I feel it's more a consultative process rather than a teaching process.

No. Supervision is definitely not teaching. Teaching is more like a one way process, although not exactly so. ... Whereas by definition research is to create original knowledge. And if that is the case you can't teach that fellow. He has to create his own.

No ... more guiding than teaching because the student always knows more about the topic than the supervisor. It's a matter of just getting that student to put his/her ideas down in a way that's going to pass the PhD examination.

Three supervisors said "yes and no" to supervision being teaching. Their comments follow.

Less structured and formalised than undergraduate [teaching], but involves the same attempt to induce the student to think through a problem, and methods and concern themselves with issues that perhaps the supervisor is more knowledgeable about. Not really teaching, but not just conversation either.

Yes and no. Parts of it are teaching. Teaching how to do research, teaching how to write a PhD, teaching how to write a research paper, that's all teaching. But other parts of supervision are doing research, and the actual doing of the research is I think more than teaching.

Less in PhD than masters. Masters involves teaching someone how to do research. PhD is meant to be you show us that you can do original research and the teaching is more of steering in the right direction or anticipate dead holes rather than providing an intellectual input.

Slight faculty differences were apparent regarding whether supervisors viewed supervision as teaching. Supervisors from the Arts Faculty were slightly more likely to see supervision as teaching than the supervisors from the other faculties. In general, supervisors were more likely to see supervision as teaching than their students did.

Several supervisors put forward the idea that the model of supervision has changed in recent years and that the new model incorporates teaching. An experienced supervisor commented that many supervisors do not see this and hard work is needed to get the message across to them. She said that, historically, supervision has not involved teaching. But she does not think you can supervise without teaching nowadays. Another supervisor agreed that there are different models of supervision.

Research has such a variety in it that some supervisors will have the opinion we are going to produce PhD students who are going to be

independent researchers. And if the student comes in, he is going to be left alone, such that he can swim or sink as he wishes. If he survives, he is a good independent researcher, if not he should not be doing a PhD. That's one attitude, and then you have the other extreme. The student comes in to be fully supervised, to the extent that he is being told to do exactly what the supervisor wants ... And then there are people [supervisors] in between.

A third supervisor described the apprenticeship system of supervision as archaic and said it does not necessarily seem the ideal way of teaching. He added that it was open to abuse.

There is such a chance for ... manipulation of the student, you see that often. Students who are, at the very least, they're abused academically or working on papers that the supervisor has very little input on and it still comes out in the supervisor's name. And lots of other sorts of things.

A problem for several supervisors was that, as the number of PhD students was increasing, one does not just get the "best of the road students". The question that then arises is how much help is it reasonable to give a weak student? Some of their comments follow.

... worry that the university and/or the department has an attitude that if they've [students] got a minimum qualification of some sort, then we'll [supervisors] get them through a higher degree, and feel some sort of obligation to get them through.

A lot of young postgraduates are not so well prepared. ... they have not been so well prepared by undergraduate studies beforehand.

In summary, there were divided opinions from both supervisors and students about whether supervision incorporated teaching. Supervisors were more likely than students to say supervision did incorporate teaching, particularly Arts Faculty supervisors. Perhaps, in part, these perspectives relate to one's definition of teaching. The researcher did not provide a specific definition of teaching. Several supervisors suggested that the model of supervision had changed in recent years, and that the model now needs to incorporate teaching. Several supervisors also presented the dilemma of increased numbers of postgraduate research students, some of them with minimal qualifications and poorly prepared. How much individual teaching and help is it reasonable for supervisors to give PhD students given the time constraints academics are experiencing in the current university system?

5.5.7 Summary

For the supervisors in this study the main determinant of their supervisory style was an assessment of an individual student's needs. Other influences were the stage of the thesis, how they themselves were supervised and their philosophies and experiences of supervision. This is similar to the findings of the previously reported Burgess et al. (1994) study. They found supervisors adopted a flexible approach to supervision based on their assessment of the intellectual ability and expertise of the student, the supervisor's own doctoral experience and the stage of the research. Most supervisors in the current study claimed that they changed their supervisory style for different students. The evidence from student accounts in this study generally did not support this claim.

Most students regarded their supervisors' styles as "non-directive". The rest said "reasonably directive"; none said "directive". Supervisors were inclined to say that they provided more direction. This is consistent with previous research (Welsh, 1978) where supervisors described various amounts of direction and students described the "non-directive" supervisory style. There was general agreement though that supervisors provided more direction when students were experiencing difficulties. Some supervisors from the other faculties provided more direction early to establish the projects, whereas some Arts Faculty supervisors gave less direction early to provide students with creative space.

Students reported a variety of closeness of supervision with most students describing their supervision as either "close" or "not close". Most supervisors did not agree that they supervised closely being more likely to agree with the "not close" estimations. Supervision in the other faculties generally tended to be closer than in the Arts Faculty. Moses (1981a) also found that there was more supervisory direction and involvement in science than social science and arts. Supervisor business effected the closeness of supervision for some students in this study.

Most participants described an "interactive" supervisory style. This style includes guidance, advice, suggestions, discussion, negotiation and support. This style was strongly linked with the development and maintenance of good, working supervisory relationships. The five students who said that their supervisors did not have an

interactive style all reported unsatisfactory supervisory relationships. The supervisors of three of these students were concerned about academic progress; this may have contributed to the problem.

Most students met with their supervisors at least monthly, some more frequently. Other faculties' students and full-time students tended to have more frequent supervisory meetings than Arts Faculty and part-time students. Two students complained that supervisors missed scheduled meetings and one was concerned regarding the lack of quality time.

Students and supervisors expressed divided opinions regarding whether supervision incorporated teaching. Supervisors were more inclined to say yes than students, particularly Arts Faculty supervisors. Most authors consider that supervision incorporates teaching (see eg, Connell, 1985; Green & Lee, 1995). Brown and Atkins (1988) suggested that supervision represents "the most complex and subtle form of teaching in which we engage" (p. 115). Several supervisors in the current study suggested that the model of supervision has changed and does need to incorporate teaching. Yeatman (1995) agrees with this. She believes that with increased PhD student numbers, many from the wrong side of traditional academic tracks, the traditional apprenticeship model is a very "hit-and-miss" method (p. 9). Some supervisors in the current study also expressed concern regarding poorly prepared students and questioned how much individual teaching and help was appropriate and reasonable. This has been reported previously. Moses (1984) found that in seminars/workshops the most frequently suggested topic for discussion raised by supervisors was how much help to provide students considering that they should be doing a piece of original and independent research.

Questions about the supervisor's supervisory style have been answered from both the students' and supervisors' perspectives. The levels of autonomy of PhD students and how supervisors help their students to be autonomous, independent researchers will now be presented.

5.6 The Development of Student Autonomy

Autonomy is about students' ability to manage their research projects. This means choosing the topic, methodology, etc., and the amount of guidance needed by or given to students by supervisors during the different stages of their research. Delamont et al. (1998) described this as creating a delicate balance: "Central to the problems facing supervisors of doctoral students is creating a delicate balance between dominating the student's research and neglecting it. Too much control threatens the originality of the PhD and the autonomy of the novice researcher; too little can delay completion and even lead to total failure" (p. 157).

During their first interview nine of the 21 student participants described themselves as "fairly autonomous" in their PhD research. They said that they functioned independently with a reasonable amount of guidance from their supervisors. Representative comments follow.

Fairly autonomous, ... getting guidance, ... really good. ...Can bring along difficulties, and that's probably more effective than just getting feedback on written stuff [work].

... managing the research and getting guidance and support when needed.

Pretty free wheeling, but getting guidance and critique from supervisor.

The remaining 12 students described themselves as "very autonomous", functioning with minimal guidance from their supervisors. Comments from some of these students who found this a positive experience follow.

... completely autonomous from the start. ... receive guidance, for example, feedback on writing, read this, talk with so and so, etc.

... functioning very autonomously ... free to choose direction and work through.

I couldn't stand some of the relationships I've seen where the supervisors are almost collaborators and in fact suggest research directions for the students, and that type of thing would drive me to distraction.

However for five of these 12 students this was a problem. They felt that they were largely supervising themselves, and would have appreciated more supervisory input. Their comments follow.

... would like more detailed guidance and feedback.

... largely supervising myself, ... inevitably you do unless you've got someone who's so closely linked, you're never going to have the conversations that you really need to have. ... getting support but not pragmatic focused help.

[Supervisor's name] is not really helpful, it's up to you ... could have helped more [supervisor].

... functioning mostly autonomously ... have spoken to [supervisor's name] about this ... don't necessarily want it this way ... would like a bit more help. ... feel as if I'm chasing my tail.

Basically I've had to explain to [supervisor's name] what my project is. And my meetings with him are just really letting him know what I'm doing. ... ideally I'd like someone that has ... expertise in the area I'm working in.

Neither the age nor educational background of these students provided insights as to why these students were experiencing this problem. Gender and faculty trends were not evident either. Their supervisors represented a variety of levels of academic appointment and PhD supervision experience. Two of these dyads were in relationships categorised as fluctuating²⁷. Two more were in deteriorating relationships. The last relationship was always poor. Students saw power as being a problem in four of the five supervisory relationships. Three of these five students had complained that their supervisor's supervisory style did not suit them.

Five of the nine students who originally said that they were "fairly autonomous" reported becoming more so over time. A transition from lots of discussion with their supervisors and joint decision making to less discussion and the student making the decisions signified this transition. The question of who made the final decisions about the research was important to students; 15 of the 21 said that they made the final decisions after discussion and negotiation with their supervisors. In fact one student defined autonomy as "making the decisions and controlling things yourself".

²⁷ This categorisation occurred earlier in this chapter in section 5.3.

Supervisors generally regarded their students as being less autonomous. Only six students' supervisors said that their students were "very autonomous", that is, functioning with minimal guidance from them. Twelve students had claimed to be "very autonomous". For the six students whose supervisors regarded them as "very autonomous", there was general supervisor-student agreement in five instances. Three students had said they were "very autonomous" and two regarded themselves as having made the transition from "fairly" to "very autonomous" during the course of their study. The other student regarded himself as "fairly autonomous", and said he was "getting guidance and critique from his supervisor". However his supervisor saw this student as functioning too independently. He wanted him to be less autonomous, to listen more and take advice. This supervisor thought that his student was not hearing what he was saying and he did not have a feel for how a "PhD thesis is structured, what's in it" because the student had an atypical preparation for PhD candidature. The student does not have an undergraduate degree and his master's degree is "on published work, not a research degree".

The supervisors of 13 students considered that their students were functioning "fairly autonomously" with reasonable amounts of discussion and guidance. Only nine students had regarded themselves to be "fairly autonomous". There was agreement for five supervisor-student dyads that the students were functioning "fairly autonomously". However in the other eight dyads, there was supervisor-student disagreement, with the students seeing themselves as "very autonomous" and the supervisors seeing the students as "fairly autonomous" and needing reasonable amounts of help and guidance.

The supervisors of a further two students said that their students needed a lot of guidance and direction. Neither of the students agreed. One student considered himself to be "fairly autonomous". The other considered herself to be "very autonomous" and was one of the students who felt she was supervising herself and would have welcomed more supervisory assistance. This student's supervisor commented that students are not always as autonomous as they think they are:

Some students think they're very competent at things and can work on their own and do this and that, and then the results are terrible. ... I don't know what [student's name] would have said on that front ... she

still needs an awful lot of help ... and if she thought she didn't she was mistaken.

Supervisors generally regarded students as functioning less autonomously or independently than students did. One reason for this may be the definition of autonomy. The students considered that they were the ones making the decisions and doing the work, and therefore they were autonomous. Most supervisors agreed that they let their students make the decisions. Another reason put forward by one of the student participants is that students are "perhaps not aware of the valuable amount of input from supervisors". In his own case the ideas and hypothesis were his, but he acknowledged considerable help from his supervisors regarding how to sharpen the focus and address the research. Two supervisors said that if students are unaware of the assistance they are getting from their supervisors in the shaping of their theses, this means that they have good supervisors. A comment from one of these supervisors follows.

At PhD level ... the people are developing their own product, they are developing their own idea. And they have a level of ownership. And that's important. You have to maintain that level of ownership. ... A good supervisor should be able to take that person [student] and guide them without that person necessarily knowing.

Another two supervisors differentiated between the "autonomy of ideas" and the "autonomy of work processes" and commented that if students were not being told what to do, they see themselves as autonomous.

Several supervisors commented that the level of autonomy given depends on the individual student. A representative comment follows.

I've had people [students] who have worked very independently and maturely ... it's been mainly a question of guiding them from one step to the next ... but that hasn't been a problem of not being autonomous at any stage. It's been a sort of trying to extend their competence at doing research. ... Sometimes it does involve developing specific skills, and in some cases, I'm not sure that the various bits of the thesis writing are always independent. ... some students will always be stronger in some aspects than others.

Most supervisors had strategies to assist students to become more independent and autonomous if this were necessary. However, two supervisors admitted they were not sure how to develop autonomy in students and another was not consciously aware how

she develops student autonomy unless it does not materialise. Supervisors' comments on how to help students to function independently follow.

I think the students need to develop their ability to criticise their own work. ... This can be done by taking them through something someone else has written, ... a book or a thesis. ... or it can be done by ... perhaps rewriting with them certain sections [of their theses], and then seeing whether they can do the rest.

Research is to create original knowledge. ... He [the student] has to create his own. And that is important, the process of creating something new. I do not believe that as a supervisor all the time pointing, and doing, and helping to create new knowledge. He [the student] has to go through the process or at least a substantial portion of it himself, such that he has the confidence and he knows the process.

... encourage them [students], particularly in the first year of a PhD, to spread their interest rather than focus it too narrowly, to pursue a number of branches they might have for their thesis, not to worry too much about getting it hammered into shape too quickly. In that way I hope to help them generate a sense of enthusiasm and confidence in their own capacities.

Three publications per PhD. ... first one driven by me [supervisor] ... will do a lot of the work [supervisor], which teaches them about the research process.

The chief way in which I find I can help students generally at the postgraduate level, possibly any level, is by having written work from them, chapters of theses in the cases of postgraduates, which I can study in detail and make detailed comments on.

However for three supervisors these strategies were not working and their students were failing to take the next step.

I've tried to break the task up into doable units of work. And she [student] has actually produced a huge amount of material. I've got stacks. She sees that as the first draft of her thesis. And there's not even a chapter there. And I can't get her to see that it's not a first draft of her thesis.

I've tried lots of little things to see if I could get better results out of her. I've constantly been trying to check with her whether there was any better approach I could have, either in my written comments or in my oral interaction with her. And I've asked [supervisor's name], who supervised her before, and anyone else I know who knew her, if they could think of any other things I could do. And I suppose, I've simply tried to be polite and careful, but to indicate the urgency. One thing that we have done, in a rather specific way, is that I have largely given up commenting on the details of her English. For two reasons, one because

she has the help of someone from the Language and Learning unit. [Person's name from Language & Learning] said he was willing to take more of that on. And the second reason was that it occurred to me that we were spending too much time correcting the details of sentences and paragraphs that probably weren't going to be in final version because of larger scale problems with them.

... it didn't stop me attempting to communicate what the issues were, and I can't see that the part-time nature [of the student's candidature] would have prevented him from assimilating that if he were of the right mental capacity to do the job in the first place.

One of these students had a second class honours degree, one had an atypical preparation for PhD candidature with no undergraduate degree and a master's degree by publication, and the third was upgraded from a master's degree. The student's supervisor later regretted the upgrade; his student had failed to perform since. One student was an international student, who was experiencing severe language difficulties in addition to academic problems.

5.6.1 Summary

Students attributed greater autonomy to themselves in relation to their PhD work than their supervisors did. This may be because, generally, students were making the final decisions on their research after discussion with their supervisors, and actually doing the research work. The importance of students making the final decisions was highlighted by most of the student participants in this study. This phenomenon has been reported previously (Leubs et al., 1998).

Five students considered that they were given too much autonomy by their supervisors; they would have liked more supervisory input into their research. All five were categorised as having supervisory relationship problems. Students saw power as an issue in four of these supervisory relationships. Three students had complained about their supervisor's supervisory style. This finding that some students would have liked more supervisory guidance regarding their research is consistent with previous research (Pole et al., 1997; Powles, 1988a, 1988b, 1994). Haksever and Manisali (2000) received 57 responses to a questionnaire survey of doctoral students in Construction Management Engineering in the United Kingdom. Their results indicated that 58 percent of respondents were unhappy and received less help than they expected. The area of greatest concern to these students was direct research-related help.

Supervisors had various strategies to develop autonomy or independence in their students. Some of these strategies were similar to the “structured ‘weaning’ programme” suggested by Phillips and Pugh (1994, p. 162). However these strategies were not working for three supervisors and their students were failing to take the next step. Their students’ educational preparation for PhD candidature may have been a factor here.

An issue that emerged as an important transaction, particularly for the student participants, was continuity of supervision. Aspects of this transaction will now be presented.

5.7 Continuity of Supervision

Continuity of supervision emerged as a transaction to be negotiated between students and supervisors. Continuity of supervision was interrupted and thesis work slowed by a number of factors. Sometimes students’ personal problems and ill health interfered with the continuity and slowed their progress. For some students this resulted in a formal period of intermission. Supervisors were generally supportive of their students’ personal problems and ill health, and most viewed it as part of their role to assist students through these difficult periods. Supervisors were mostly satisfied with their student’s progress, but a few expressed various degrees of dissatisfaction. Another interruption to the continuity of supervision for students was a change of supervisor. In most instances this was temporary, whilst some students had a permanent change of supervisor.

5.7.1 Students’ Personal Problems and Ill Health

Nearly all the student participants in this study had the continuity of their supervision temporarily interrupted and progress on their thesis slowed, to some extent, by a variety of personal problems and illness. Finding time for their studies was a difficulty for full-time students, as invariably they had to work part-time to supplement their scholarships. Most of the students on scholarship had not completed when their scholarships expired and this added to their distress. Their energies were directed towards obtaining extensions of scholarships, and when this was not successful or the extension expired, finding some means of financial support. One of these students had a period of intermission; others converted to part-time candidature. Finding time for their studies

was also a problem for part-time students. Invariably these students had demanding jobs with related professional activities, and time to pursue PhD studies was limited. Many of the students experienced a significant period of ill health. Others complained of a lack of motivation because there were no longer any jobs in academia for them when they finished. Both academic and personal isolation affected a significant number of students and interfered with their progress. Eleven students (seven from the Arts Faculty and four from the other faculties) complained of experiencing academic isolation; four of these students experienced personal isolation as well. All four students were from the Arts Faculty. The academic and personal isolation was so severe for one student that she "fluctuated between hope and depression". Six students (two from the Faculty of Arts and four from the other faculties) said that networks with other PhD students, academics and industry, or being a part of a research team prevented or alleviated feelings of isolation for them. Two students, both from the Arts Faculty, said that they were "too busy to care".

All but one student felt that their supervisors were supportive regarding their personal problems or ill health. This student was in a supervisory relationship categorised as deteriorating²⁸, and had experienced a change of supervisor. Initially she regarded her new supervisor as supportive, but this did not last, and she eventually considered her new supervisor to be unsupportive of her health and personal problems.

In summary, nearly all the student participants in this study had the continuity of their supervision interrupted and their progress slowed to some extent by a number of personal problems and illnesses. Personal problems included finding time for PhD work because of other commitments, lack of motivation and feelings of academic and personal isolation. Feelings of academic and personal isolation were higher for Arts Faculty students. Networks and being part of a team helped with isolation and were more prominent for students from the other faculties. All but one student regarded their supervisors as supportive during difficult periods. Some of these students with personal and health problems continued with their studies, although their progress was delayed. Others formally intermitted from candidature.

²⁸ This occurred earlier in this chapter in 5.3.3.3.

5.7.2 Student Intermission

Nine of the 21 student participants in this study had a formal intermission at some stage during the data collection period for this study. Usually the period of intermission was six or 12 months. Students' reasons for having intermission are listed below. One student gave two reasons.

- Work commitments (2 students);
- A growing dissatisfaction with the way the PhD was heading and progressing (2 students);
- Professional commitments (1 student);
- Personal problems (1 student);
- To earn money after his scholarship expired (1 student);
- Supervisor was going on leave. Rather than adjust to another supervisor, the student took intermission. This student had already had a permanent change of supervisor prior to the data collection period for this study (1 student);
- Ill health (1 student); and
- A poor progress report combined with ill health (1 student).

Of the nine students who had intermission, six were full-time and three were part-time. At the end of the data collection period for this study seven of the nine students had returned from intermission. Five were continuing with their studies, one withdrew from candidature in good standing shortly after he returned from intermission, and one student was "writing-up away". The student who withdrew in good standing was a part-time student who cited work commitments as his reason for intermission. Two students were still on intermission. Both of them were full-time. One had intermission to earn money because his scholarship had expired. The other did so after a poor progress report combined with ill health.

In summary, nine of the 21 students had a formal period of intermission during the data collection period for this study.

5.7.3 Changes in Response to Student Progress

Most supervisors were either satisfied or satisfied to some extent with their student's progress. They generally made allowances and provided varying degrees of support and direct assistance when their students were experiencing personal problems or ill health.

Most considered this part of the supervisory role and function. Seven supervisors however were dissatisfied with their student's progress. Five of these supervisor-student dyads were already experiencing problems in their supervisory relationships²⁹. Two of these dyads were categorised in fluctuating relationships, two in deteriorating relationships and one in a poor relationship. The other two dyads were not experiencing interpersonal relationship problems. Four of these students were full-time and three part-time.

Five supervisors said that their student was experiencing difficulties coming to terms with the requirements of a PhD. Three of their students had idiosyncrasies in their educational background for PhD candidature³⁰. Specifically one student has an honours degree that is not research-based and in a discipline that is not established in the academic environment. This student changed her supervisor and subsequently made satisfactory progress. The second student has both an honours and masters degree. Both of these degrees are old and in different disciplines from each other and from the PhD discipline. This student had a period of intermission from which he returned with a new, more work-related topic. The third student has a diploma but no undergraduate degree, and a master by publication degree. These awards are in a discipline that is not established in the academic environment and is different from the PhD discipline. He ended up withdrawing in good standing. The remaining two students were admitted to candidature via more traditional academic avenues. One has a second class honours degree. This student's supervisor always thought the student should have been admitted to a master's degree rather than PhD candidature, and upgraded to PhD if she met the requirements. This student had a change of supervision. Some months later she had a year's intermission because of poor health and an unsatisfactory progress report. She was still on intermission when the data collection period for this study ended. The other student was upgraded from a master's to PhD degree, her supervisor later expressing regret about this decision. She was an international student and went home to "write-up-away". She had not submitted her PhD when the time limit for her candidature expired. In addition to the supervisors expressing concern about the students coming to terms

²⁹ This was described earlier in this chapter in section 5.3.

³⁰ This was previously presented in 4.2.1.

with the requirements of a PhD, in two of these five cases, supervisors were also concerned about their students devoting sufficient time to study because of full-time employment.

For the remaining two students where the supervisors were dissatisfied, one supervisor was not concerned regarding the student's academic ability, rather, his ability to find time for his study because of demanding full-time work. This student subsequently withdrew in good standing. The other supervisor felt that his student was more comfortable with short-term contract research than her thesis work that is in a "murky problematic area". This student started doing an ARC project during a period of intermission and it is likely that she can now extend this work for her PhD.

In summary, seven supervisors were dissatisfied with their student's progress. Five supervisors said that their students were having difficulties coming to terms with the requirements of a PhD. Three of these five students had an atypical educational preparation for PhD candidature, the fourth a second class honours degree and the fifth was upgraded from masters to PhD candidature. In the other two cases the supervisors were not concerned about the academic ability of their students, other factors were at play.

Student factors as outlined above, and the subsequent transactions with their supervisors and the university interfered with the continuity of supervision and delayed progress for these students. Supervisor factors, specifically a change of supervisor, also affected the continuity of supervision and the progress of some students.

5.7.4 Change of Supervision

For some students their changes of supervision were temporary, for others they were permanent.

5.7.4.1 Temporary Change

Ten of the 21 student participants had a temporary change of supervision during the data collection period for this study. This temporary change was generally for six months because of supervisors having what the students described as "sabbatical leave". The alteration to supervisory arrangements caused problems for eight of the 10 students and retarded their progress. Five of the eight students were in supervisory relationships

categorised as good. For the other three students there were already difficulties relating to their supervision.

As previously mentioned, one student took intermission. She did this because she had already undergone a permanent change of supervision about which she had not been consulted. Although she was dissatisfied with her supervisory arrangements, she was not prepared to adjust to another supervisor for six months. Thus she had intermission. Another student's supervisor made himself available to his students on Fridays whilst he was on leave, rather than assign an alternative supervisor. This proved unsatisfactory, as the student was unable to secure quality time with his supervisor. It is difficult to ascertain whether the supervisor being on leave was the problem, as this student was generally dissatisfied with the amount of supervision he received.

Six of the 10 students described the temporary changes to their supervisory arrangements as problematic. For example, one student described the situation where although her supervisor had been conscientious in finding someone else to formally supervise her while she was away, the student was effectively without supervision for the period of her supervisor's absence. This student's associate supervisor took over her supervision while her main supervisor was away. Previous to this, the student had only said hello to him in passing in the corridor. The student did not consider him able to help her. She added that there were two people in the department who could help her, but one was away and the other had just forgotten an appointment she had made with him seeking assistance outside the formal supervisory arrangements. Another student, who was optimistic about working with her associate supervisor while her main supervisor was away, also reported a bad experience. This student knew her associate supervisor well although he had not been actively involved in her PhD supervision. A political situation directly involving the student and equipment she needed for her research erupted in the department shortly after her supervisor went on leave. The student felt that her associate supervisor did not support her and she was denied access to the equipment. This resulted in a period of illness and several months where no significant progress was made on her PhD. Another student whose supervisor was about to go on leave for a second time made the following comment:

And the transferring back and forth with supervisors is actually a process that no one acknowledges as being really difficult ... that the

transitory stage is really confusing. And then the next supervisor has to go back and read everything that you've done and ... Everyone thinks in different ways, so it's really like what's going on here?

Another student who was generally satisfied with his supervision commented:

The only problems, if you could call them that, have been due to leave, absences and illnesses and what-have-you of the supervisors.

One of the above student's supervisor also identified that her period of leave had really slowed her student's progress markedly, despite the fact she had left the student with an able associate supervisor. The student had previously worked with the associate supervisor as a research assistant, but the associate supervisor had not been an active associate supervisor in relation to the student's PhD project.

How and when they were told about the temporary changes in supervision was a concern for two students. Their comments follow.

I didn't even know he [supervisor] was going on sabbatical until the week before.

Someone else told me ... that [supervisor's name] was going on leave in second semester, and she hadn't told me herself.

The above student was extremely upset that her supervisor had said she would prefer the student not to contact her whilst she was on leave.

I don't think that's a good supervisor. ... You can't just have a job and then you just take six months off the job, and expect to still ... do you know what I mean? It just, I just think that's really ridiculous. I understand leave and people have to have leave for unexpected circumstances and all the rest of it. But I still think you can be nicer about it than just say 'no I don't want contact with you for six months', you know, go away kind of thing.

In contrast, two students did not find their temporary change of supervision whilst their supervisors were on leave problematic. The first of these had an active associate supervisor. She met her main supervisor monthly and every three months had meetings with both her main and associate supervisors. She also she gave written work to both supervisors. In this way her associate supervisor was kept abreast of her research. Consequently the transition to her associate supervisor when her main supervisor went on leave was smooth. In addition she had some interaction with her main supervisor

whilst he was on leave on key points. This student was from the Arts Faculty. The second student who did not experience problems was from the other faculties. His PhD was a related part of a larger project and a research assistant was at hand to whom he could turn for assistance. He also had e-mail and telephone contact with his main supervisor whilst he was on sabbatical as well as the temporary appointment of a substitute supervisor.

In summary, ten of the 21 student participants in this study had a temporary change of supervisor during the data collection period for this study. The change caused problems for eight of the 10 students with subsequent effects on their progress. Most of these students were in satisfactory supervisory relationships. None of these students had an active associate supervisor. By contrast, two students did not experience problems whilst their main supervisor was on leave. One of these students had an active associate supervisor and the other student was involved in a team project and there was a research assistant who was familiar with the project to help him. In addition, both these students' supervisors were available for contact by their students during their leave, should the need arise. Having someone to work with who was already familiar with the research, plus the possibility of contact with the supervisor, facilitated the temporary transition from one supervisor to another.

5.7.4.2 Permanent Change

Three students experienced a permanent change of main supervisor during the data collection period of this study. It is worth noting that nine significant changes had already occurred prior to this. One student had experienced a change of universities, but not a change of supervisor. She had followed her supervisor when she changed her job from one university to another. Two students had experienced both changes in universities and changes in their supervisors. One did this because he was dissatisfied with his previous arrangements, the other because of a change of emphasis in his research. One student had changed his department and supervisor for personal reasons. This change did not relate to his supervision with which he was happy. Five other students had had a change of supervision for various reasons.

Two of the three students who experienced a change of supervision during the data collection period for this study were in supervisory relationships categorised as

deteriorating³¹. One negotiated a change of supervision herself because she was dissatisfied with her supervision and making very slow progress. This student had an honours degree that was not research-based and in a discipline that had only recently entered academia. She needed more pragmatic help than she was getting from her supervisor. She also had methodological differences with her supervisor. This student's supervisor was dissatisfied with her progress and said the student did not understand the requirements of a PhD. After changing her supervision this student was extremely satisfied with her new supervisor and made steady progress. She was about to submit her thesis for examination at the end of the data collection period for this study. The second student's supervisory arrangements were changed at a committee meeting called by her supervisor to discuss her progress. It emerged at the meeting that the student was extremely dissatisfied with her relationship with her supervisor. This became the focus of the committee rather than the student's academic performance, and the student's main supervisor was changed. Initially this change of supervisors worked well for the student; then she began to see her new supervisor in a similar light as her original supervisor.

Last year we organised together when we would meet again. This year ... none of that happened, but it wasn't just that none of it happened because we weren't seeing each other [the student was ill]. It was also that ... she didn't actually make an effort to contact me.

The student felt that her new supervisor should have been more supportive regarding her illness.

Feeling sick, and then having that sort of compounded by the person who's meant to be the other half of your team ... not going into bat for you at all. ... It was just really, really disheartening.

Illness and poor academic progress resulted in an unsatisfactory progress report. At the end of the data collection period for this study the student was on intermission from her studies.

The third change of supervision during the data collection period for this study occurred because the supervisor left the university. This student had already experienced a temporary change to his supervisory arrangements without difficulty. This temporary

³¹ This occurred earlier in this chapter in 5.3.3.3.

change was described above. When his main supervisor resigned, several supervisory meetings were arranged before he actually left the university, to decide how to manage the transition. Those involved included the main supervisor who was leaving, the substitute supervisor who had taken over from him when he had been on sabbatical, the research assistant and the student. Several decisions were made to ensure a planned and smooth transition to the new supervisory arrangements. It was decided that the substitute supervisor would become the new main supervisor, and that the research assistant who had previously only been involved informally would formally become an associate supervisor. The supervisor who was leaving would continue his involvement as an associate supervisor. Experimental work was completed, the structure and chapters of the thesis and possible examiners planned. Thus a plan and timeframe was mapped out and agreed to by all. The student said that the change over of his supervision was handled well by both his original and new supervisors, but added it also depends on the student.

It's not only up to the supervisors, it's up to you to manage your own affairs. He [the student] should be able to anticipate ... the problems he's going to face. So he should actually organise or change ... his schedule to ... suit it.

The student's new supervisor highlighted the importance of ensuring that the student was not disadvantaged in any way. He also felt that they had worked out satisfactory transition arrangements. He attributed this to:

- The fact that the student was a good student.
- The excellence of the original supervisor's supervision. He said that the student had been supervised very closely and given a lot of his supervisor's time early in the supervisory process. As the student had developed autonomy and confidence, the original supervisor had backed off. By the time he took over the student's supervision, the student was fairly independent.
- The communication and planning process that occurred prior to his taking over the student's supervision.

Two students and four supervisors commented that it should be easier for students to change supervisors. One student suggested a survey every six months to see if you are compatible with your supervisor. If required, a third party should then manage changes

of supervision tactfully. Another student, after telling the story of a friend who changed universities to change her supervisor, said:

It's awful. It should be easier. I think it is actually easier. But everyone has this perception that it's impossible.

One experienced supervisor described a situation where she is helping a student who is being supervised by someone else. The student needs a lot of talking through of ideas before she writes. Her supervisor is not the sort of person who does that with students, he reads drafts and provides comments. This supervisor saw the problem as:

something to do with his idea of the limits of the supervisory relationship which for her were unsatisfactory.

This experienced supervisor had a management function in relation to supervision, and said several students came to see her because they wanted a change of supervisor, but did not know how to make the move. She commented that some supervisors saw their reputation at stake if students moved to another supervisor. Some supervisors considered this a failure. It then became awkward for the student to negotiate a change of supervisor. This concerned her:

you can't possibly be the right person for every student. ... When you see what it does to a student, it's just horrifying. And it cannot be that important to you [the supervisor] ... that we have to do that to our students.

Another experienced supervisor said:

I don't have any qualms at all about people moving away from one supervisor to another. I think that that is a very sensible thing to do as early as possible if people don't feel that they're being adequately supervised, they should go somewhere to someone else. They should even shop around at the beginning and perhaps shop around in a number of universities to make sure they're going to get the best supervision for themselves. ... If a particular style doesn't suit someone, they should really try someone whose going to adopt a style that's more suitable to them. ... It's absolutely crucial to the success of the thesis. ... The right person in the academic sense ... they have to be appropriate to the topic and sometimes the topic changes as you go along. ... And also appropriate in terms of matching working methods and personalities and things like that. ... It's not unusual for people to change supervisors a number of times.

Two other supervisors agreed that it should be easier for students to change their supervisors. One highlighted the problems associated with this for students, for example, longer candidature, other supervisors' reluctance to take the student on, and that, in science, a change of supervisor often meant a change in PhD project as well.

In summary, three students experienced a permanent change of main supervisor during the data collection period for this study. In two cases there were supervisory relationship problems and the supervisors were dissatisfied with their student's progress. The student initiated one change. A committee convened by the supervisor to discuss the student's progress initiated the other change. In one instance the change of supervisor resulted in a rapid acceleration of the student's thesis work and the student was about to submit her thesis; in the other instance ill health and poor academic progress resulted in intermission. Two students and four supervisors highlighted that it should be easier for students who are dissatisfied with their supervision to change supervisors. There needs to be some mechanism in place to facilitate this.

The third student had a permanent change of supervisor because his supervisor left the university. Careful planning by the original supervisor, the new supervisor and the student ensured a successful transition. The student highlighted that the student has a responsibility in this process.

5.7.5 Summary

Most students experienced personal or health problems that delayed their progress to varying extents. For nine students this resulted in a period of intermission. Supervisors were considered to be supportive of students' ill health and personal problems in all but one case. Hockey (1995) also found that many supervisors took the pastoral care side of their responsibilities seriously and devoted considerable time and energy to it. The importance to students of supervisor concern and support regarding their general welfare has already been established (Moses, 1981a, 1988; Welsh, 1978; Wilson, 1980) along with the fact that some supervisors do not see this as part of their role (Wilson, 1980).

Academic isolation affected half the students in the study and was more evident for students from the Arts Faculty. Networks and being part of a team alleviated isolation, which was more prominent for students from the other faculties.

The progress of seven students was a concern for their supervisors. Five supervisors said that their students were having difficulties coming to terms with the requirements

of a PhD, and, to some extent, all five students had questionable educational preparation. Academic preparation and ability were not at issue for the other two students. Other factors were play.

Temporary change of supervision created problems and delayed the progress of nearly all the students who underwent this experience. In two cases, when the student had someone they knew to work with who was already familiar with the research, plus the possibility of contact with the supervisor, problems did not arise.

Three students experienced a permanent change of supervision. In two cases this was because of relationship breakdown. One of these students initiated the change herself and made a successful transition to her new supervisor. For the other student, the change occurred at a committee meeting organised by the student's supervisor because of poor academic progress, and although initially happy with her new supervisor, this student became dissatisfied again with her supervisory arrangements. Some students and supervisors highlighted that it should be easier for students to change their supervisors. Acker et al. (1994) found that students were disinclined to seek a change of supervisor, they seemed to prefer to come to terms with unsatisfactory supervisory relationships. Only one student in this current study actively sought a change of supervision during the data collection period. Several other students were dissatisfied with their supervision, but like the students in the Acker et al. (1994) study, did not seek change.

The third student had a permanent change of supervisor because his supervisor left the university. Good planning ensured a successful transition for this student.

Another important transaction that emerged during the data collection for this study was that of the initial and evolving match between the student and supervisor.

5.8 The Match between Student and Supervisor

Earlier in this chapter (in 5.2.5) the initial academic match between students and their supervisors was examined. This often formed the main basis for the selection of supervisors. However topics can change, and changes in the academic match between

students and supervisors were reported during the data collection period for this study. Moreover, other areas of matching emerged as significant, namely, research methodology and the working relationship and patterns that were negotiated and developed.

Several supervisors and even more students said it was essential to achieve a high match between student and supervisor in all three areas, that is, topic, methodology, and working relationship and patterns. Some supervisors and students were willing to accept a high match in two areas and sacrifice one area. The area that most supervisors were willing to sacrifice was the match regarding the methodology, whereas students were more inclined to sacrifice a match regarding the topic. There was general agreement from most supervisors and students that the match on working relationship and patterns was crucial. Arguments for sacrificing the match regarding the topic centred on the view that you need some knowledge, but do not need to be an expert. Arguments for sacrificing the methodology match centred on the view that you can involve someone else in this part of the supervision if needed. Some supervisors' comments follow.

A PhD has a number of benchmarks that you can identify with a PhD and one of them is that a student has to become an expert in the area by the end of it, and more so than their supervisor. And in some cases the students were already experts in it before they started. My role in those sorts of instances ... is helping them with a conceptual model, the framework, the research design, methodology, and putting the whole thing together in a fluid logical sequence. ... can advise students to read further when I have more knowledge in the area. ... feel more comfortable when I have knowledge in the area, but don't see it as essential as long as the student knows the area well. It would not prevent me taking on a student. The interpersonal relationship structure is important to me.

It's a bit like a good marriage, you work at it. And if you don't work at it ... you never become well matched. And you do have to adapt, and you do have to adjust. And you have to just check out what sort of person you need to be for this student. ... If the student has the confidence that even if you don't know, you will access for them people who do know ... I actually think the interpersonal relationship is the critical thing. ... the other things must be there, I mean they can't not be there. But it's often possible to actually facilitate those in other ways.

I don't think the PhD student is being helped by being assigned on a permanent basis to a supervisor who hasn't worked in the area and isn't able to help. ... It creates problems of academic credibility. When there are crises, they can't be overcome. I think that we are so much part of an international community of scholars, that it's the networking that is

very important at all levels. Whether it's choosing examiners or knowing what to read and so on. Having said that, the specific topic someone is working on will become their area of expertise. And I would expect that by the end of the thesis, the person whose written the thesis will know a lot more about it than I do. That's what doing research is all about. Secondly, in terms of methodology, I think there is a distinct problem if the supervisor wants to direct a student according to particular methods, ... particular methodology of research and the student is unhappy with that. I don't think that is going to be reconcilable. Either the student needs to give way, or the supervisor needs to give way. I'm inclined to think that if the student is really good, the supervisor should give way. As long as the supervisor is happy that the student knows what she or he are doing. Now the third thing is personality. I think that personality, if there is a personality clash between the student and the supervisor, ... I don't think they can work together. I think that matching PhD students or MA research students and supervisors is a little bit like matching marriage partners, and if they don't get on this will be a very unproductive relationship. ... I think that there will always be cases where supervisors should be separated from, or students should be separated from their supervisors when crises occur. Or when it looks even at the very early stage as if they won't be able to work together.

In my point of view topic expertise and knowledge in the general area, if not the specialist sub-field of the topic, is crucial to a good supervision. It means that I as supervisor am always at home with the material, and even with drafts, I don't have a problem with chasing things up or knowing what's being talked about. ... In terms of methods, or manner of proceeding in the work, it's pretty important as well. I find it more difficult to be a good and helpful supervisor to students who use methods different from mine, not just research methods, but also with different writing styles.

Some students' comments follow.

You want someone [supervisor] whose got some sort of sympathy with what you're doing, but someone who understands the way people operate, the way you can gather research information to me is far more important than having an absolute subject match. ... want a supervisor with a flexible approach.

The current faculty arrangements where students are encouraged to seek out someone [supervisor] who has expertise in the content area as the basis for supervisory arrangements is not entirely appropriate because it's much more important I think to get the interpersonal and skill development process aspects correct.

For myself I need to be well matched in all three [topic, methodology and working relationship]. ... If I don't get along with someone, I find it very difficult to work with someone. At the same time getting along with someone doesn't mean that I can work with them. My honours

supervisor and I were a disaster working together, when not working we got on really well. Especially in the beginning of the PhD it's just critical that there's personal rapport. And if you disagree on the methodology, you're in trouble there. ... The topic and the methodology are important in the early stages but become less important as you go on. But with the relationship, important the whole way through. I would not have been able to cope without [supervisor's name] support.

I have mixed feelings. If person matched interpersonally and with methodology ... if there's a less than perfect match in content, I'm not as worried. But then you run the risk of finishing and having someone read it who knows more about that area, and not feeling it's adequate. There's a risk in the content gap, but I don't know how much I worry about that risk.

... part of it is a personality thing, but it is also a matter of style, how you approach an issue. ... chose supervisor because of reports from other students about [supervisor's name] intellectual style which accommodates differences. ... The outstanding thing about [supervisor's name] supervisory position is that it is both consistent and able to be flexible. ... It's [the supervisory relationship] never just about content. ... One of the marks of the supervisory relationship is that it is almost always a case of the supervisor leading the candidate through a process with which the candidate is not particularly familiar.

If I had to sacrifice something it would be the match in the topic area. I would want them to know something, but if the other two [methodology and working relationship] are strong enough, then you can compensate for that lack by going to someone else or setting up an associate supervisor who can provide that lack. If the interpersonal stuff isn't there, then it doesn't matter how good their [supervisors'] knowledge is.

It's really more to do with personality rather than topic. [Supervisor's name] is flexible ... and if he doesn't know, he would know where to send you. ... If the chemistry doesn't work, you can't work with your supervisor.

I don't think you [student] could survive if you didn't have a good working relationship with your supervisor. I have talked with other students who haven't and you can see that that's what's stopping them from going any further. ... I am well matched in all three areas, but it has taken two supervisors. It is difficult to get everything in the one person [supervisor]. ... If I only had one person who couldn't meet my needs in all three areas, the two I would see as critical are interpersonal and topic. If you have done a good methodology research subject beforehand, you should be able to choose your methodology and work with it at PhD level. Or else you could audit a research methodology subject. ... Essential for me to have flexibility, ... and trust, ... and autonomy.

It's very important otherwise you probably get a wrong feeling about yourself ... it's always the case when you do your PhD. What the immediate person [supervisor] says, it always matters. If he criticises you and you start feeling ... I should do something about it. If he says okay everything is fine, you take it for granted that everything is fine.

One supervisor who did not see it as matching, described a situation where matching evolved:

It's not as I see it, wholly a matter of matching, but a question of the supervisor in the area of research methods giving the lead, and showing the student what he is doing if there isn't a match to begin with. ... it is the job of the supervisor to create it [a match] in the long run over the course of time. It doesn't matter if the matching doesn't happen at first, because that's perhaps part of the learning process anyway. ... for both supervisor and student.

In summary, an academic match between the supervisor's area of expertise and the student's PhD topic usually forms the basis for the allocation of supervision. However it emerged throughout this study that it was also important for students and supervisors to be matched in their interpersonal working relationship and patterns and the research methodology. Some supervisors and students were willing to accept a high match in two areas and sacrifice one area. The area that most supervisors were willing to sacrifice was the match in methodology, whereas students were more inclined to sacrifice the topic. Both groups thought the match in interpersonal working relationship and patterns was crucial.

5.8.1 Changes in the Match between Student and Supervisor

Earlier in this chapter in 5.2.5 the initial academic match between students and their supervisors in relation to the content of topics was presented. In many instances this formed the basis for the selection of supervisors. At their first interview nine of the 21 students said that their topic was "well matched" to their supervisor's area of expertise. A further 11 students said that there was a "reasonable match". Only one student said her topic was "not matched" to her supervisor's expertise. She was one of the two students who had chosen their supervisors for personal reasons. Three students complained of methodological differences with their supervisors.

Throughout the data collection period for this study, five of the nine students who were well matched to their supervisor's area of expertise remained so. They also managed to

achieve a match regarding the research methodology to be used and their interpersonal working relationship. For these five dyads, both supervisors and students were in agreement about this. Earlier in this chapter two of these students had reported having personal friendships with their supervisors, two had described fluctuating relationships and the third an improving relationship. Another two of the nine students who were initially well matched with their supervisors also remained so and achieved a match in relation to methodology and interpersonal working relationship, but they stressed that it took two people to achieve a match in all three areas. One of these students had a main supervisor and a research assistant helping him, the other had co-supervisors with complimentary skills and abilities. Once again there was student and supervisor agreement regarding this. One of these students was in a stable good relationship with his supervisor and the other in an improving relationship. The remaining two students in this group of nine withdrew from candidature, one in good standing. One was in a deteriorating relationship, the other in a stable relationship.

The 11 students who initially said that there was a reasonable match with their supervisors regarding their topics also underwent changes during the data collection period. Only three of these 11 students maintained that the match with their supervisors regarding their PhD topic remained reasonable. One of these three students also achieved a high methodological and interpersonal match, and was in a good, stable relationship with her supervisor. There was supervisor agreement regarding this. The second student in this group of three who continued to maintain a reasonable topic match with his supervisor (neither saw the topic match as that important) had methodological differences with his supervisor and a moderate interpersonal relationship. Their relationship fluctuated and there was moderate supervisor-student agreement regarding these matters. The third student who maintained a reasonable topic match with her supervisor described their interpersonal relationship as poor. There was very little student-supervisor agreement for this dyad.

Five of the 11 students, who initially said that they had reasonable topic matches with their supervisors, said that this match improved over time. Four of these five also reported achieving high methodological and interpersonal matches with their supervisors. Two, however, commented that it required an effort from two supervisors to achieve this. One had a main supervisor and an active associate supervisor, the other

a main supervisor and an informal supervisor for topic expertise. Two of these four students were in improving relationships with their supervisors, one had a personal friendship and the fourth a good, stable relationship. In all four cases there was student-supervisor agreement regarding these issues. The fifth student who reported an improving topic match with his supervisor achieved a moderate methodological match and a low interpersonal match with his supervisor. This student was in a deteriorating supervisory relationship and whilst there was student-supervisor agreement regarding the topic and methodology match, there was little on the interpersonal match.

Two of the 11 students who originally reported a reasonable topic match reported later being unmatched. Both also reported low methodological and interpersonal matches and were in deteriorating relationships with their supervisors. There was little or no student-supervisor agreement in these two dyads. The remaining student of this 11 withdrew from candidature in good standing. He was in a stable relationship with his supervisor and there was reasonable student-supervisor agreement for this dyad.

Only one student initially said she was unmatched with her supervisor regarding her topic. She had chosen her supervisor for personal reasons. Over time this topic match improved from low to moderate, and she was moderately matched with her supervisor methodologically. It was in the interpersonal area where this dyad achieved a high match and there was student-supervisor agreement. But they were in a fluctuating relationship to some extent because of the moderate topic and methodological matches and the student's failure to make progress on her PhD. The student admitted that her supervisor had introduced her early on to someone who was better matched regarding her topic, but she believes that the PhD must come from her, and that the supervisor is peripheral in a sense.

In summary, initially nine students said that their PhD topics were "well matched" theoretically to their supervisor's area of expertise. For seven of these nine students this match lasted throughout their research and they also achieved satisfactory interpersonal and methodological matches with their supervisors. The other two students withdrew from candidature. A further 11 students initially said that the match between their topics and their supervisor's expertise was "reasonable". For three of these 11 students this remained true, and one achieved a satisfactory interpersonal and methodological match

with her supervisors also. Five of the 11 said that the academic match with their supervisors improved throughout the research, however one of these students was unable to achieve a good working relationship with his supervisor. Two students said the academic match with their supervisors waned throughout the research to a point regarded as “unmatched”; these two students also said that there was no interpersonal or methodological match with their supervisors. Only one student had initially said there was “no academic match at all” between her supervisor’s expertise and her PhD topic, this remained so but the student had a very good working relationship with her supervisor. Four students emphasised that it took more than one person for them to achieve a match in all areas: topic, methods and working relationship.

5.8.2 Summary

An academic match between the supervisor’s area of expertise and the student’s PhD topic usually forms the main basis for the allocation of supervisors. However it emerged throughout this study that it was also important for students and supervisors to be compatible in their interpersonal working relationship/patterns and in the methodology used for the research. The interpersonal working relationship/patterns match was considered to be crucial. The need for matching of student and supervisor in this area has previously been identified (Elton & Pope, 1989; Moses, 1981a, 1984; Phillips & Pugh, 1987, 1994; Walford, 1981; Welsh, 1983). More recently Fraser and Mathews (1999), after surveying 32 postgraduate students in the Faculty of Agriculture at the University of Western Australia, found that students ranked non-expertise-related characteristics of supervision, ie, providing support; balancing creativity and criticism, as more important overall than expertise related characteristics. This is consistent with the findings of this study with the interpersonal working relationships/patterns being regarded as the most important.

Throughout the data collection period for this study 12 of the dyads achieved a match in all three areas. But in four cases it took more than one supervisor to do this.

5.9 Chapter Summary

This chapter has presented the findings on the transactions that occurred during the process of supervision for the 21 student-supervisors dyads. These findings were presented under the following section headings where the key findings were:

- The picture of supervision and choice of a suitable topic. After a variety of informal processes, formal supervisory arrangements were put in place for the 21 students. Most students only had one active supervisor and were working on individual research projects that were either “well matched” or “reasonably well matched” with their supervisor’s area of expertise. The importance of both students and supervisors having choices was emphasised. Some supervisors were concerned about feeling pressured to supervise students who were inadequately prepared or whose area of interest differed from their own.
- The relationships between students and supervisors. Different relationships developed between students and supervisors ranging from personal friendships to unsatisfactory relationships that resulted in changes of supervision. Changes in relationships were reported over time. A good interpersonal working relationship between supervisor and student, and an ability to negotiate and renegotiate, was viewed as important.
- Power as a dimension of the supervisory relationship. Whilst a power imbalance between supervisors and students was acknowledged, most supervisors took steps to minimise it. This was acknowledged by most of the student participants. Power was not seen as an issue within the supervisory relationship for most, but not all, of the students.
- The supervisor’s supervisory style. For the supervisors, the main determinant of their supervisory style was an assessment of an individual student’s needs. But there was some evidence in this study that supervisors’ styles were inflexible. Supervisors’ styles tended to be “non-directive” and either “close” or “not close”, with closer supervision in the other faculties than the Arts Faculty. An “interactive” supervisory style was described and was linked to the development and maintenance of good working supervisory relationships. The view that the model of supervision has changed and should include teaching (especially for the growing number of less well prepared students) was discussed.
- The development of student autonomy. Students attributed greater autonomy to themselves than their supervisors did. Various reasons for this were discussed. A few felt they were given too much autonomy by their supervisors; they would have preferred a “structured ‘weaning’ programme” that was described by Phillips and Pugh (1994, p. 162).

- Continuity of supervision. Most students experienced either personal problems or ill health, which slowed their progress at some stage of their candidature. All but one reported supervisor concern and support. For almost half of the students, ill health or personal problems resulted in a period of intermission. Temporary change of supervision created problems and delays for nearly all the students who underwent this experience; however there were two examples of successful temporary change.
- The match between student and supervisor. Most supervisors and almost all students thought it was important to be matched with their supervisors in interpersonal working relationship/patterns and in methodology as well as topic expertise. The match regarding interpersonal working relationship/patterns was seen as the most important.

The next chapter, Chapter 6 Outcomes, presents and examines the outcomes of the PhD supervisory process for the 21 student-supervisor dyads.

Chapter 6 – Outcomes

Chapter 3 introduced Stake's (1967) framework for the organisation and presentation of the results for this longitudinal study. This framework has three component parts: antecedents, transactions and outcomes. Each of these component parts forms a chapter that contains the findings from this study. Chapter 4, Antecedent Conditions presented and described the antecedent conditions that the supervisors and students in this study brought to the PhD supervisory process. Chapter 5, Supervisory Transactions, presented and described the transactions that occurred during the supervisory relationship and process. This chapter, Chapter 6 Outcomes, will present and describe the outcomes of the supervisory relationship and process. The outcomes will be analysed in relation to the antecedent conditions and supervisory transactions.

Stake (1967) says of outcomes "traditionally, most attention in formal evaluation has been given to outcomes – outcomes such as the abilities, achievements, attitudes, and aspirations of students resulting from an educational experience" (p. 528). For the purpose of this research, the educational experience has been the PhD supervisory process. "In short, outcomes are the consequences of educating – immediate and long-range, cognitive and conative, personal and community-wide (Stake, 1967, p. 528). Stake views outcomes as judgements that are relatively static or constant. For example, a student has either submitted a thesis or not.

The outcomes of the PhD supervisory process, after careful thought, were divided into two themes:

- Thesis progress; and
- Satisfaction with supervision.

The outcomes relating to these themes will be examined in relation to the relevant antecedent conditions and supervisory transactions.

6.1 Thesis Progress

When the data collection for this longitudinal study was completed some students had completed or nearly completed their PhD, some were ongoing, and some had discontinued.

6.1.1 Completed and Nearly Completed Theses

Seven students were in this group. Three students had completed their theses and been awarded their PhDs. A further four had nearly finished with their theses either under examination or ready for examination.

6.1.1.1 Relationship to Antecedent Conditions

Three of these students were part-time, four full-time. Four were female and three were male. One was aged from 23 to 29, three from 30 to 39, two from 40 to 49 and one from 50 to 59. Four were from the Arts Faculty, three from the other faculties. Two were international students and three were academic staff members. Three students had a relevant master's degree, which was considered a normal educational preparation for PhD studies. Two had been upgraded from masters to PhD candidature. The remaining two had idiosyncratic educational preparations for PhD studies. One had an honours degree that was not research-based and in a discipline that was new to the academic environment. Her PhD was in a different discipline. The other had only an undergraduate degree in a different discipline to his PhD studies. He was given probationary candidature on the basis of work experience and publications in his PhD discipline area. None of these students had proceeded straight to PhD candidature from undergraduate study. Generally there is an over-representation of international students and academic staff in this group, and an under-representation of young students straight from undergraduate study, and students with probationary candidature.

Six of these seven students had male supervisors and one a female supervisor. Three female students had male supervisors, one female student had a female supervisor, and the three male students all had male supervisors. Three of these seven students' supervisors were professors/heads of departments/directors of centres, two were associate professors, one was a reader and one was a senior lecturer. Four were experienced supervisors having supervised four or more PhD students to completion, one was moderately experienced having supervised 1 to 4 PhD students to completion,

and two were inexperienced and had not at the commencement of this study supervised any PhD students to completion. Generally, this supervisor group represents a greater proportion of senior academic staff and experienced supervisors than the total supervisor sample in this study.

As to the purpose of a PhD, four of these students said the purpose was an original contribution to knowledge and the other three said both an original contribution to knowledge and research training. Only one of their supervisors saw the purpose of the PhD as an original contribution to knowledge, the other six said both original contribution to knowledge and research training. There was agreement regarding the purpose of a PhD for four student-supervisor dyads. The students of the two supervisors, who spent time counselling potential PhD students about what they expect to get out of a PhD before they enrol, were both in this group³².

Students' and supervisors' expectations of the supervisory process were evaluated by their responses to the Role Perception Rating Scale (RPRS), developed by Moses (1981a). The seven students and supervisors in this group tended to have higher numbers of identical responses (scores ranging from 2-5 out of 11) or similar responses (scores ranging from 5-8 out of 11), and low numbers of opposite responses (scores ranging from 1-3 out of 11). Identical responses are when the supervisor and student gave the same response to an item on the RPRS, for example, both responded 2. Similar responses are when the student and supervisor gave responses to an item that were not identical, but on the same side of the response options, and therefore indicating similar but not identical attitudes or opinions. For example, the supervisor responded 4 and the student 5. Opposite responses are when the student and supervisor responses were on opposite sides of neutral for an item, therefore indicating a difference of attitude or opinion. For example, the student responded 2 and the supervisor 4. The tendencies for this completed thesis group will be compared with the other two groups to see if any trends are evident.

³² This was reported in 4.4.4.6.

6.1.1.2 Relationship to Supervisory Transactions

Four of these seven students only had one supervisor and another had a main supervisor and an inactive associate. The other two had two active supervisors. One had a main supervisor and an active associate supervisor, the other co-supervisory arrangements. This represents the only two instances in this study where students had two active supervisors as part of their formal supervisory arrangements.

Four of these students said that they chose their supervisors, although one changed her mind about this as her relationship with her supervisor deteriorated, and said she did not have a choice. One student said her supervisor chose her, another that his supervisor was suggested by industry, and another that his former supervisor at another university suggested his supervisor after the direction of his research changed. These three students felt that they could have said no to their supervision if they wanted to. Only one student made the choice of supervisor for academic reasons only. Five said that their choice of supervisor included academic reasons and interpersonal reasons also, saying that it was important for them to be able to work constructively with their supervisors. The remaining student said her supervisor chose her.

Five of these seven students were working on individual PhD topics, which they had developed themselves with varying degrees of supervisory assistance. The other two were working on group projects that had been developed by their supervisors, although for one of these students, the project became more individual as it advanced. Four of these students said that their PhD topic was "well matched" to their supervisor's area of expertise. There was a "reasonable match" for the other three students, although for one this improved to "well matched" as her work progressed and drew nearer to her supervisor's area of expertise. This represents a closer matching of students' PhD topics to supervisors' expertise than in the total sample.

Only one of these seven students met with a supervisory committee during this study. This was when he was upgraded from probationary to full candidature. He said that this had gone well, and that he had received a moderate amount of helpful feedback.

All seven students reported having professional relationships, with good interpersonal working aspects with their supervisors. For six of these students it was important to

have a good interpersonal relationship with their supervisors; the other student did not respond directly to the question. Over time, for three of these students, the relationship with their supervisor developed and improved, and degrees of personal friendship were reported. One student however ended up in a relationship with her supervisor that fluctuated, but lasted until the completion of her thesis. She reported that power was an issue for her at several stages of the supervisory process. Another student's relationship with her supervisor deteriorated so much, that she sought alternative supervisory arrangements. This student developed and maintained a professional, good interpersonal relationship with her new supervisor. Generally, this group of students reported having more positive supervisory relationships, and when problems arose they were resolved fairly quickly and with a minimum of disruption to thesis work.

Regarding supervisory style, two students said that their supervisor's style was "reasonably directive", the other five said that their supervisors had a style that was "non-directive". Despite this, five of the seven said that their supervisors supervised them "closely", and knew exactly what they were working on. Only two said that their supervision was "not close". Six of the seven said that their supervisors had a style, which they described as "interactive" (see 5.5.3). The student, whose supervisor did not have an interactive style, was the one whose supervisory relationship deteriorated so much that she sought alternative supervisory arrangements.

Three of these students met with their supervisors more frequently than each month, three met monthly, and one less frequently. Two students complained that their supervisors were too busy and one student said that her supervisor missed some scheduled meetings. Again, this was the student who changed her supervisory arrangements. Generally, the supervisory style of the supervisors of these seven students was closer and more interactive than for the total sample. Meetings tended to be more frequent.

Three of these students regarded themselves to be functioning "very autonomously" and enjoyed their autonomy. The other four said that they were "fairly autonomous", functioning with varying degrees of supervisor help and guidance. Generally, this group was positive about the levels of autonomy that they negotiated with their supervisors.

The supervisors of six of these seven students were satisfied with their student's progress. The only supervisor who expressed dissatisfaction was the supervisor of the student in the supervisory relationship that deteriorated. This supervisor was of the opinion that the student did not understand the requirements of a PhD. The student had wanted more specific guidance from the supervisor than was forthcoming. She made rapid progress with her thesis after negotiating a change of supervisor. Significantly, none of the students in this group had a period of intermission.

Four of the seven students experienced a temporary change of supervisor whilst their supervisor was on leave. This did not cause problems for two of these students. One of these students had a main supervisor and an active associate supervisor. Because the associate supervisor was involved in the supervision, he was able to continue the supervision without problems or delays for the student when the main supervisor was on leave. The other student was involved in a group project and was able to turn to the research assistant when his main supervisor was on leave. The research assistant had a good working knowledge of the project. In addition this student was provided with a temporary supervisor and his usual supervisor made himself available via the telephone and e-mail whilst he was on leave. But the temporary change of supervision caused problems and delays for the other two students. In one case the supervision changed from co-supervisor arrangements to one of the co-supervisors who had to take on an additional and different role. In the other case the supervision changed from the main supervisor to an inactive associate supervisor. Here, the problems and delays for the student were significant.

Two students in this group of seven had a permanent change of supervision during the data collection period for this study. One student initiated the change herself because she was dissatisfied with the supervision she was getting, and was anxious to make better progress. Her progress accelerated after the change. The other student had already had a successful temporary change of supervision. The permanent change occurred when his supervisor left the university. Beforehand, a planning meeting was held to ensure a smooth transition. This meeting involved the student, the original supervisor and the new supervisor, who had been the supervisor during the temporary change of supervision. The transition was a success.

In summary, at the end of the data collection period for this longitudinal study, seven students had completed or nearly completed their theses. Significant antecedent conditions included an over-representation of international students and students who were also academic staff members, and an under-representation of young students straight from undergraduate study and students who were given probationary candidature. Their supervisors tended to be from the more senior academic levels and more experienced than the total supervisor sample for this study. The two supervisors who spent considerable time counselling prospective students about the requirements of the PhD process, and what they expected to get out of undertaking PhD study, had students in this group. Supervisors and students had higher numbers of identical and similar responses, and lower numbers of opposite responses, on the RPRS.

Significant supervisory transactions included the fact that the only two students participating in this study who each had two active supervisors as part of their formal supervisor arrangements were in this group. All students in this group felt that they had some choice regarding their supervision. In addition, their PhD topics tended to be matched more closely with their supervisor's area of expertise than for the whole sample. The only student in this group who had probationary candidature reported a satisfactory experience when he transferred to full candidature. Generally, this group of seven students reported more positive supervisory relationships than the whole sample, and when there were problems, they tended to be resolved quickly with minimal disruption to thesis work. The supervisory style of the supervisors of these seven students was closer and more interactive than for the whole sample; meetings tended to occur more frequently. The students were positive about the levels of autonomy they negotiated with their supervisors. Only one supervisor expressed dissatisfaction with her student's progress. This student made excellent progress after she negotiated a change of supervisor. Significantly, none of the students in this group had a period of intermission. Also only one student in this group suffered long-term consequences associated with a temporary or permanent change of supervision. The student who was disadvantaged had a temporary change from a main supervisor to an inactive associate supervisor.

6.1.2 Ongoing PhD Supervisory Relationships and Theses

Ten students were continuing work on their PhD theses. Six students and their supervisors expected that this would take a further six to 12 months. A further two students and their supervisors expect thesis submission to take a further 12 to 18 months. For the other two, submission is expected to take even longer and the supervisors of both these students expressed doubts about completion.

6.1.2.1 Relationship to Antecedent Conditions

Seven of these students were full-time, three part-time. This is a slight over-representation of full-time students. Two of the full-time students became part-time after their scholarships expired; they needed part-time work to earn an income. Six were female and four male. There were no international students in this group. Four were aged from 23 to 29, three from 30 to 39, two from 40 to 49 and one from 50 to 59. Seven were from the Arts Faculty and three from the other faculties, a slight over-representation from the Arts Faculty. Seven of these 10 students had a typical educational preparation for PhD candidature. Three of these have honours degrees, one first class, one second class and one unspecified. The student with first class honours was admitted to probationary candidature. Two students had proceeded to PhD candidature straight from undergraduate study. Three students have both honours and masters degrees, and one a masters degree. One of the 10 students was upgraded from masters to PhD candidature. He did not have an undergraduate degree and had been admitted to master's candidature on the basis of a graduate diploma and publications in the area of his PhD thesis. The remaining two students had an atypical educational background for PhD candidature. Both had undergraduate and masters degrees in disciplines that which differed from their PhD disciplines. In addition, for one of these students, many years had elapsed since the previous study. One of these two students was admitted to probationary candidature. One student was an academic staff member.

Six supervisors were male and four female. There were two female-male student-supervisor dyads, four female-female dyads and four male-male dyads. Four supervisors were professors/heads of departments/directors of centres, one an associate professor, one a reader, two senior lecturers, one a lecturer and one a research fellow. Two supervisors were experienced, having supervised more than four PhD students to completion. Four were moderately experienced; they had each supervised 1 to 4 PhD

students to completion. The other four were inexperienced supervisors with no PhD completions. These supervisors are at slightly lower levels of appointment and have slightly less supervision experience than the supervisors of the students that have completed or nearly completed their theses.

Three students but no supervisors in this group saw the purpose of PhD studies as making an original contribution to knowledge. Three students and four supervisors said that the purpose of the PhD was research training, whilst four students and six supervisors said that it was both. For six of the 10 student-supervisor dyads there was agreement regarding the purpose.

Identical (2/5 out of 11) and similar (3-8 out of 11) responses for student-supervisor dyads on the RPRS remained fairly high, with opposite responses remaining low (0-3 out of 11).

6.1.2.2 Relationship to Supervisory Transactions

Six out of these 10 students had a main supervisor only, three had a main supervisor and an inactive associate supervisor, and one had a main supervisor and an inactive associate supervisor plus a defacto supervisor. The defacto supervisor was an expert in the area of the PhD topic.

Five students said that they chose their supervisors, one said her supervisor chose her but that she could have said no. One student's supervisor was suggested by her previous supervisor who left the university before the data collection period for this study. She could have said no to this supervision. Three students said that their supervisor was allocated. In one instance, this was at another university and the student followed her supervisor when she changed universities. In another instance the student felt that he could have said no to the supervision. The third student did not feel that saying no was an option. Four students said that the choice of supervisor was for academic reasons only, one saying "mainly academic", and another saying that she did not really have a choice because her supervisor was allocated. One student chose her supervisor for interpersonal working relationship reasons only. She was one of the two students who said that they were talked into undertaking PhD study by academic staff in the department. The remaining five made the choice for interpersonal and academic

reasons. For eight of these students the interpersonal working relationship with their supervisors was important. It was not very important for one and another was unsure of its importance. Generally, this group was more likely to have only one active supervisor than were the students who had completed or nearly completed their theses.

All 10 students in this group were working on individual PhD topics. In eight cases the students, with varying amounts of supervisory guidance, developed these topics. One student was working on a project that was developed by her supervisor. Another student was further developing an individual Australian Research Council (ARC) project. For three of these students, there was a "good match" with their supervisor's area of expertise. For six the match was "reasonable". The remaining student's PhD was "unmatched" with her supervisor's area of expertise. This is the student who chose her supervisor solely for interpersonal reasons. Generally, this group was more likely to be working on individual projects and less likely to be well matched with their supervisor's area of expertise than were the students who had completed or nearly completed their theses.

Three students in this group met with committees at some stage of the supervisory process. Two were upgraded from probationary to full candidature. Neither saw the preparation for, or the actual committee meeting, as particularly helpful. One said that the amount of preparation required distracted him from his PhD work. The third student met with a supervisory committee because her supervisor was dissatisfied with her progress. This was a very distressing experience for both of them. The student claimed that there was a problem with her supervision and that she did not work effectively with her supervisor. This deflected the discussion away from academic matters and resulted in a change of supervision for the student.

Initially seven of these 10 students said that they had professional relationships, with good interpersonal aspects, with their supervisors. One of these students added that the relationship had been poor early on, but that they had both worked to improve it. Three students and their supervisors said that they had personal friendships. Over time changes occurred in the relationships for six of these 10 dyads. None of these changes involved the three dyads that had personal friendships. For one dyad the relationship improved and a degree of personal friendship developed. For three dyads the

relationship fluctuated and there were periods of disharmony and unrest. For two dyads the relationship deteriorated. One of these was the student who said that the relationship was poor early on and whose supervisor had initiated a committee meeting because she was dissatisfied with the student's academic progress. A change of supervision followed. The other student who was in a deteriorating relationship with his supervisor was looking for alternative supervision. This group of students was more likely to be experiencing fluctuating or deteriorating supervisory relationships than were the group who had completed or nearly completed their theses. Three of these 10 students saw power as an issue in their relationships with their supervisors. Two were in fluctuating relationships and one in a deteriorating relationship. Power issues are more significant in this group than in the group of students who had completed or nearly completed their theses.

Five students described their supervisor's supervisory style as "reasonably directive", five as "non-directive". Three said that their supervision was "close", three "reasonably close" and four "not close". Eight of the 10 said that their supervisor's style was "interactive". The two who did not were the two students that were in deteriorating relationships with their supervisors. Three students met with their supervisors more frequently than each month, five students met their supervisors each month, one less frequently and one organised a meeting when needed. Four students in this group complained that their supervisor was too busy, one of these saying that his supervisor missed scheduled meetings. Generally, this group of students' supervisors supervised less closely and met with their students less frequently than did the supervisors of the students who had completed or nearly completed their theses.

Four students in this group saw themselves as "fairly autonomous". The other six said they were functioning "very autonomously". Three of the six said this was a positive experience. The other three did not. They wanted more guidance from, and discussion with, their supervisors. Two were in fluctuating relationships with their supervisors; the third had a deteriorating relationship. Two had complained that their supervisor was too busy. One had chosen her supervisor for interpersonal reasons only, but she subsequently lost the ability to have in-depth academic discussions regarding her topic with her supervisor. This group was more likely to think that they were given too much

autonomy by their supervisors compared with the students who had completed or nearly completed their theses.

Three supervisors expressed dissatisfaction with their student's progress; two were in fluctuating relationships and the other a deteriorating relationship. Supervisor dissatisfaction for this group is slightly higher than for the group who had completed thesis work. As well seven out of the 10 in this group had a period of intermission of either six or 12 months. At the end of data collection for this study, two of these students were still on intermission. This is significant: none of the group who had completed or nearly completed their theses had intermission.

Five of these 10 students experienced a period of leave undertaken by their supervisors. Four were supervised during this period by associate supervisors who had previously been inactive associate supervisors. The other student's supervisor came in on Fridays to help. During these temporary arrangements, all five students had problems and delays with their thesis work. They experienced greater disruption than the group which had completed thesis work.

One student had a permanent change of supervision during the data collection period for this study. This happened after her supervisor arranged a supervisory committee meeting because she was dissatisfied with the student's progress. At the meeting, the student's dissatisfaction with her supervision overrode any discussion regarding her progress, and the student's supervision was changed. Initially the new supervisory arrangements appeared to be working well. Then ill health and lack of progress resulted in a poor academic progress report for this student. She was on intermission at the end of data collection for this study.

In summary, at the completion of data collection for this study 10 students were continuing work on their PhD theses. Significant antecedent conditions include the fact of a slight over-representation of students from the Arts Faculty in this group. There is also a slight over-representation of full-time students. One student was an academic staff member, one student did not have an undergraduate degree and two had proceeded straight from undergraduate study to PhD candidature. Two students were given probationary candidature. Generally, the supervisors were at lower levels of

appointment and less experienced as PhD supervisors than the supervisors of students who had completed or nearly completed their theses. Students and supervisors had more identical and similar responses and fewer opposite responses on the RPRS.

It is a significant supervisory transaction that this group was more likely to have only one active supervisor than the students who had completed or nearly completed their theses. One student in this group felt that she had no choice regarding her supervision, and one student based her choice solely on interpersonal reasons. She was one of the two students who claimed they were talked into PhD study by departmental academic staff. This group of students was more likely to be working on individual projects and less likely to be well matched with their supervisor's area of expertise than were the students who had completed or nearly completed their theses. Three students in this group met with a committee during this study's data collection period. Two were transferred from probationary to full candidature and one because her supervisor was dissatisfied with her progress. All found meeting with a committee either unhelpful or harmful.

The three students who had personal friendships with their supervisor were all in this group. Generally, however, this group was more likely to be experiencing fluctuating or deteriorating supervisory relationships than the group who had completed or nearly completed their theses. Moreover, power was more likely to be an issue in the supervisory relationship. This group of students' supervisors tended to supervise less closely and meet with their students less frequently, compared with the supervisors of the group who had completed or nearly completed their theses. Student complaints about supervisors being too busy were more numerous. Three students complained that they were given too much autonomy or independence. They would have liked more guidance from, and discussion with, their supervisors.

Supervisor dissatisfaction regarding student progress was slightly higher for this group. Seven of the students had a period of intermission. Five of the 10 experienced a temporary change of supervisor whilst their supervisor was on leave; all five had problems and delays in relation to their thesis work during this time. One student had a traumatic permanent change of supervisor.

6.1.3 Students who had Discontinued PhD Study

Four students discontinued their PhD studies. One student went on write-up-away status but she did not submit a completed thesis and her candidature lapsed. Another student withdrew from candidature after about one year's full-time study because he got a job. He said he might have persevered with his PhD if more departmental support had been forthcoming and had he a more experienced supervisor. Two students withdrew in good standing after about three year's part-time study. One had a new job that was very demanding and wanted some time to spend with his family. The other had a busy full-time job in academia and his transfer from probationary to full candidature did not go well.

6.1.3.1 Relationship to Antecedent Conditions

Two students were full-time, two were part-time. Three were male and one female. One was an academic staff member and one was an international student with significant language difficulties to overcome and cultural adjustments to make. The other two international students were able to do this and were in the group that had completed their theses. One student was aged 23 to 29, one 30 to 39, one 40 to 49 and one 50 to 59. One was enrolled in the Arts Faculty and three in the other faculties. This is an over-representation from the other faculties. One student had been upgraded from masters to PhD candidature. Her supervisor later regretted this decision. He said she was progressing reasonably well before the upgrade, but had since faltered. Two students had experienced typical educational preparation for PhD studies. One had a second class honours degree and had proceeded straight to PhD candidature. The other had a master's degree. One of these students said he had been talked into doing a PhD by academic staff in the department. Both were given probationary candidature. The remaining student had an atypical educational preparation. He had no undergraduate degree and his master's degree was by publication in a discipline new to the academic environment. His PhD studies were in a different discipline again. He was also given probationary candidature. Three of these four students were given probationary candidature, a significant over-representation when compared with the completed and in progress student groups.

All these students' supervisors were men; three dyads were male-male and the female student had a male supervisor. One student's supervisor was a professor/head of

department/director of centre, one an associate professor and two were lecturers. There were proportionally more supervisors from the lecturer level supervising this group than the two previous groups. One supervisor was experienced, two moderately so and one was his supervising his first PhD.

All the supervisors and three of the students saw the purpose of the PhD as both research training and making some original contribution to knowledge. Thus there was student-supervisor agreement for three of these dyads. One student said the purpose was research training only.

Except for the student who withdrew in good standing because of work and family commitments, identical (2-3 out of 11) and similar (4-6 out of 11) responses on the RPRS tended to be slightly lower than for the previous two groups. Significantly, opposite responses (3-4 out of 11) were slightly higher.

6.1.3.2 Relationship to Supervisory Transactions

Two students had main supervisors only, one had a main supervisor and an inactive associate supervisor, and one had co-supervisory arrangements. The student who had the co-supervisory arrangements was allocated a supervisor who had not supervised a PhD student before. The co-supervisor was away on leave, thus leaving the new supervisor and student without support. Three students said that they chose their supervisors, one said that her supervisor was allocated to her and she had no say in the matter. One chose his supervisor solely for academic reasons, one solely for interpersonal reasons and one for a combination of both. The student who chose his supervisor solely for interpersonal reasons was one of the two students who said that they had been talked into PhD study by departmental academic staff. As already stated, the fourth student had no choice. Three of the four students said that the interpersonal working relationship with their supervisor was important. The fourth did not respond when asked. Three students were working on individual projects that they developed with supervisor help. One student was working on a small group project that had been partially developed by his supervisor. Over time, this became an individual project. Two students' topics were well matched to their supervisor's expertise. Two were reasonably matched.

Three of these students were asked to see committees to transfer from probationary to full candidature. One student withdrew from candidature before the committee met. The other two withdrew from candidature in good standing shortly afterwards. One of these students believed that the committee meeting had not gone well.

All four students said that they had professional relationships with their supervisors. Three said that the interpersonal aspects were good, the fourth said that the interpersonal aspects were poor and always had been. This remained so for the duration of the supervision. Power within the supervisory relationship was an issue for one of these four students. Change over time occurred for one student, with his relationship with his supervisor deteriorating. The student attributed this deterioration to his supervisor's inexperience.

He [supervisor] probably had a tendency to be a little bit critical at times, which wasn't good for the confidence. But again that's inexperience. ... There are certain ways you have to handle people. You've got to have pretty good people skills to supervise somebody to a PhD. ... to be able to sum up how I was feeling about some things and maybe change his approach in accordance with that. ... Towards the end ... he realised that I wasn't happy and he did come out and say look I do think that you have the capabilities of doing a PhD, and a good PhD, which was good and that's what I needed to hear. But I needed to hear that a bit earlier, because basically by that stage I'd made up my mind.

The issue of student confidence in relation to first year social science PhD students has been raised by Hockey (1994). After conducting in-depth interviews with 60 first year PhD social science students in the United Kingdom, he found that students are likely to undergo some soul-searching about whether they possess the qualities necessary for obtaining a PhD. The student in this current study had similar thoughts. One of his main concerns was that he had only achieved a second class honours degree. This student was from the other faculties and withdrew from candidature after about one year's full-time study. Unfortunately, the support and confidence boost provided by his supervisor came too late.

As for supervisory style, all four students said that their supervisors were "non-directive". None were supervised closely; one student receiving "reasonably close" supervision and three students describing their supervision as "not close". Three of the four students complained that their supervisors were too busy. This is higher than for

the other two groups. Generally, the supervision of this group was less directive and less close than for the other two groups. Three students met with their supervisors more frequently than monthly, the fourth less than monthly. Later he said he wished he had met with his supervisor more often because it might have kept him on track.

He's [supervisor] a sincere sort of person, and he knows quite well what he's doing, but he's always terribly, terribly busy. And it wasn't you'll be here next month at a certain date ... But to do it [PhD] properly, you need to have someone who's going to be at you every month. By such and such, you'll come back to me with so and so. That's what I expected.

This group had more frequent meetings than the other two groups. Two of the four students said that their supervisors had interactive styles, this is less than for the other two groups.

One student described himself as "fairly autonomous", the other three "very autonomous". This was a problem for two of them who would have appreciated more supervisor guidance. One student said:

And some more guidance ... saying this is where I see your next step ... read this, solve these equations. ... I saw my friends who had supervisors who were more experienced, and they, I wouldn't say they were being spoon-fed, ... they were being taken through it step-by-step.

This is similar to the previous group (ongoing students); several students felt that they were left to their own devices. These feelings were not present for the group that had completed or nearly completed their theses.

Three supervisors were dissatisfied with their student's progress, two for academic reasons and one because the student was not finding the time for his PhD. One of the four students had an intermission. Her supervisor was taking leave and she did not want a further change of supervision. She had already had a permanent change of supervisor before the data collection began for this study. She had no say in the change. Supervisor dissatisfaction with student progress was higher for this group than the two previous groups.

In summary, four students discontinued their PhD studies during the data collection period for this longitudinal study. One went on write-up-away status, but did not submit a completed thesis and her candidature lapsed. Three others withdrew from candidature,

two in good standing, after approximately one year's equivalent full-time study. Significant antecedent conditions included one student not having an undergraduate degree, one had proceeding to PhD candidature straight from undergraduate study and one being an academic staff member. Three of these four students were given probationary candidature, a significant over-representation. There was also an over-representation of students in this group from the other faculties. Perhaps these other faculties used the committee process (already in place for transferring students from probationary to full candidature) to encourage students whose progress was unsatisfactory for whatever reason, to withdraw in good standing. The fourth student in this group was upgraded from masters to PhD candidature, but her supervisor later regretted this. It appears that there were identifiable concerns with all four students at the time they were admitted to candidature, three were given probationary status and the other admitted to masters rather than directly to PhD. There was a slightly higher proportion of academics from lower levels of appointment supervising this group of students. Students and supervisors tended to have slightly lower numbers of identical and similar responses and significantly, a slightly higher number of opposite responses on the RPRS.

Significant supervisory transactions included that all four students had only one active supervisor one of whom was on debut. One student had chosen his supervisor for interpersonal reasons alone, he was one of two students who said that they were talked into PhD study by departmental academic staff. Three of the four students complained that their supervisors were too busy; this is a higher percentage than for the other two groups. Generally the supervision this group received was less directive and less close. They were also less likely to describe their supervisor's style as interactive. Complaints of this group were that supervisors were giving students too much autonomy and too little assistance. Those that had completed or nearly completed their theses did not report these feelings. Supervisor dissatisfaction with student progress was higher for this group.

6.1.4 Summary

The above findings are summarised in Table 2 and Table 3. Table 2 contains the thesis outcomes in relation to antecedent conditions. Table 3 contains the thesis outcomes in relation to the supervisory transactions.

Table 2 - Thesis Progress and Significant Antecedent Conditions

Antecedent Conditions	Completed and nearly completed theses (7 students)	Ongoing PhD supervisory relationships and theses (10 students)	Students who had discontinued PhD study (4 students)
Students			
Enrolment status	-	More full-time	-
Gender	-	-	More males
Age	Tended to be older	Tended to be younger	-
International	2	0	1
Academic staff	3	1	1
Education	-	-	-
Probation	1	2	3
Directly from U/G	0	2	1
Supervisors			
Gender	More males	-	More males
Level of appointment	Highest	High	Lower
PhD supervision experience	Mostly experienced	Moderately experienced	Generally moderately experienced, although 1 st PhD supervision for one
Both			
Faculty	-	More Arts Faculty	More other faculties
Purpose of PhD	-	-	-
Expectations of supervisory process (RPRS)	High numbers of identical and similar responses, low numbers of opposite responses	High numbers of identical and similar responses, low numbers of opposite responses	Slightly lower numbers of identical and similar responses, slightly higher numbers of opposite responses

The number of student participants in this study is low, and not all commenced PhD study at the same time. Therefore firm conclusions cannot be drawn. However, certain trends are apparent and worthy of consideration and discussion.

As can be seen from Table 2 the educational preparation of the students, and the students' and supervisors' beliefs about the purpose of the PhD did not yield obvious differences between the groups. However, full-time students were more likely to be

ongoing and more male students discontinued their study. There were no apparent reasons for this.

Completed students tended to be older and international students or academic staff members. They were less likely to be given probationary candidature. Some of these characteristics, eg, older and academic staff members, are in direct contrast with Welsh's (1980) characteristics of the "successful" student (cited in Moses, 1981a) and copied below.

CHARACTERISTICS OF THE 'SUCCESSFUL' STUDENT	CHARACTERISTICS OF THE 'UNSUCCESSFUL' STUDENT
Science faculty student (especially if an MSc taught course)	Arts faculty student (especially if for MLitt by research)
Male	Female
Aged less than 30 on entry	Aged 30 or more on entry
Overseas origin	Home origin
Student status	Staff status
Full-time student	Part-time student
Indirect admission to PhD study	Direct admission to PhD study

Characteristics of the "successful" and "unsuccessful" student

(Welsh, 1980 cited in Moses, 1981a, p.7)

In fact the student who was awarded her PhD first was almost in direct contrast; she had most of the characteristics of the "unsuccessful" student. She was female, aged 30 or more on entry, from home origin, staff status and part-time. The only differences were that she was not from the Arts Faculty or admitted directly to PhD study. Perhaps the portrait of the completing student has changed over recent years along with the student profile³³.

Seagram, Gould and Pyke (1998) investigated a sample of factors presumed relevant to the time required to complete doctoral degrees (TTC) by surveying 154 recent graduates of natural science, social science and humanities doctoral programs at York University. They found that students in the natural sciences were the fastest completers. It was

³³ The change in profile of students over recent years was reported in 4.2.4.

otherwise for the small group of completing students in this study, although there was an over-representation of Arts Faculty students in the ongoing student group. Seagram et al. (1998) also found that there were no significant gender differences in TTC. This is in contrast to Lipschutz (1993) who found that preliminary data at the University of Michigan for the cohorts of 1975-77, 1978-80 and 1981-83 showed that generally women were more likely to take longer to complete their degrees. Lipschutz (1993) also found that the pace of women's work was faster in departments where women were present in significant numbers. This is similar to the findings of others (Neumark & Gardecki, 1998; Tidball, 1986). As with Seagram et al. (1998), there were no apparent gender differences in the group of completing students in this study. Most of the completing female students had male supervisors. This is unlikely to be significant, as most of the supervisors in this study were male. Lipschutz (1993) also found that international students completed their degrees more quickly than domestic students; a finding similar to the current study.

One notes that the completing group of students had supervisors who were the most experienced and from the highest levels of academic appointment. It would appear that both these factors might contribute to a speedy completion time for students. It is also worth noting that a higher proportion of the discontinued students had been given probationary candidature. It appears that current practices can identify "at-risk" students. If these students had been allocated supervisors that were more experienced and from higher levels of appointment, the outcomes may have been different.

Table 3 - Thesis Progress and Significant Supervisory Transactions

Supervisory Transactions	Completed and nearly completed theses (7 students)	Ongoing PhD supervisory relationships and theses (10 students)	Students who had discontinued PhD study (4 students)
Formal supervisory arrangements	Two students had 2 active supervisors	All students had only one active supervisor	All students had only one active supervisor
Students chose supervisor (Interpersonal only)	4	5	3
Students felt they had choices	7	8	3
Topics/projects	Mostly individual	All individual	Mostly individual
Match with supervisor's area of expertise	Close	Moderate-poor	Moderate-close
Committee attendance for probationary to full candidature	1 (went well)	2 (generally not very helpful)	3 (1 withdrew before and 2 after)
Supervisory relationships	Mostly positive	Varied	Varied
Power was an issue for student	1	3	1
Supervisory style			
• Direction	Mostly non-directive	Varied	Non-directive
• Closeness	Mostly close	Varied	Not close
• Non-directive and not close	1	3	3
• Interactive	6	8	2
Meetings	Frequent	Varied	Frequent
Supervisor too busy	2	4	3
Supervisor regarded supervision as teaching	Mostly	Mostly	Mostly
Autonomy development	Positive	3 complaints of too much autonomy	2 complaints of too much autonomy
Supervisor complaints of students progress	1	3	3
Intermission	0	7	2
Change of supervisor			
• Temporary	4 (problematic for 2)	5 (all problematic)	1 (took intermission)
• Permanent	2 (1 student initiated and 1 supervisor left the university)	1 (committee initiated)	0

Table 3, like Table 2, reveals some trends. The only students who had two active supervisors as part of their formal supervisory arrangements were in the completed group of students. The match between the student's research and the supervisor's area of expertise was closer for the completed group of students. The importance of the supervisor's knowledge of the research field has previously been identified (Donald et al., 1995; Holdaway et al., 1995; Marsh, 1972; Powles, 1993).

As previously reported, students in the completed group were less likely to have been given probationary candidature. When committee meetings were held to transfer probationary to full candidature, a more positive result occurred for the student in the completed group. The ongoing group found the committee meetings less helpful. As for the probationary candidates in the discontinued group, one withdrew from candidature when the committee meeting was imminent. The others withdrew immediately after. The reasons for this are not entirely clear. It is likely that communications students were given about the process, plus the abilities and personalities of the students contributed.

Students in the completed group established better, more positive supervisory relationships than did the students in the ongoing and discontinued groups. Any power imbalance was less troublesome in the supervisory relationships of the completed students. This is consistent with previous research. A quality supervisory relationship has previously been loosely linked with decreasing completion times (Friedman, 1987; Moses, 1985; West et al., 1988). Long completion times (Moses, 1985; Rudd, 1985; West et al., 1988) and high dropout rates or non-completions (Jacks et al., 1983; Moses, 1985; Rudd, 1985) have been linked to unsatisfactory or poor working supervisory relationships.

The supervision of the completing students was also "closer" and more "interactive" than for the others and they met their supervisors more frequently. The discontinued group received supervision that was "non-directive" and "not close". Perhaps more supervisory input would have changed things for these students. Previous research has also demonstrated that closer supervisory contact and involvement hastens thesis progress (Wright & Lodwick, 1989). The importance of regular supervisory meetings to assist students to complete within a reasonable time has also previously been identified (Holdaway et al., 1995; Moses, 1992b; Powles, 1989).

Supervisor business was less of an issue for the completing students but caused much concern for the discontinued group. Donald et al. (1995) highlighted the importance of supervisor availability to students and queried whether supervision was becoming an under-resourced area in the university. This study indicates that this may be true.

As for autonomy, students in the completed group were happy with the levels of autonomy they negotiated with their supervisors. There were complaints about being given too much autonomy by students in the ongoing group. The percentage of such complaints was higher in the discontinued group. This was the group that received the "non-directive" and "not close" supervision. No student complained of insufficient autonomy.

Complaints from supervisors about student progress were fewest in the completed group, increasing for the ongoing group and more so for the discontinued group. With no apparent differences in the educational backgrounds of the students in the three groups, it is unclear why some students were not making satisfactory progress.

A clear difference between the completing group and the other groups was student intermission. None of the students in the completing group had intermission, whilst significant numbers in the other two groups did. West et al. (1988) identified some experience that required the student to intermit as one reason for slow completion rates.

Temporary change of supervision was a big problem for most of the students in this study who experienced it. Even students who approached the change optimistically and were in good supervisory relationships reported negative experiences that hindered their progress. The only two students who did not report problems during a temporary change of supervision were in the completed group.

The other outcome of the supervisory relationship and process, satisfaction with supervision, will now be presented.

6.2 Satisfaction with Supervision

Another outcome of the supervisory relationship and process is the participants' level of satisfaction. This will be examined from both students' and supervisors' perspectives.

6.2.1 The Students' Perspective

Most students expressed satisfaction with their supervision and their supervisory relationships. In these instances both supervisors and students tended to be giving the researcher the same or similar information. During their first interviews with the researcher, 17 out of 21 of the students expressed satisfaction with their supervision. Three were already dissatisfied "to some extent" and one was "dissatisfied".

6.2.1.1 Satisfied Students who Remained Satisfied

Seventeen students initially expressed satisfaction with their supervision. Some of their comments follow.

It's a very, very complex and delicate relationship, the supervisory relationship. ... I have been delighted that [supervisor's name] has immediately offered a very equal dialogue as the basis for that relationship. There's no pulling rank. There's no hierarchy. It is a very adult relationship and I really appreciate that because that has not been the case in my experience.

It was good luck finding him.

... we get on well. ... if you had someone with very different expectations, it wouldn't work. If I had someone that wanted to hold my hand and lead me through the academic world, I'd bite their wrist off.

Eleven of these 17 students remained satisfied with their supervision throughout the supervisory process. Although they were satisfied with their supervision, four complained at some stage that their supervisor was very busy and that this was interfering with their supervision.

... there is a potential log jam, simply because [supervisor's name] has so many students ... difficulty making an appointment because a number of her other students near completion.

He didn't have time to do any reading, he didn't have time to read any of it.

Maybe this year he's [supervisor] been a little more busy and he's had less time to read my stuff. ... takes him longer to get around to reading it.

Both of them ... are extraordinarily busy, and it just makes it very difficult for them to provide time for me and no doubt their other PhD students.

One student would have liked more structure to her supervision, and one said that he was not sure what to do in the supervisory relationship.

Five of the 11 students that remained satisfied with their supervision were from the group of seven students who had completed or nearly completed their theses. A further five were from the group of 10 students who were continuing with their thesis work. Only one was from the group of four who had discontinued their study. This student had withdrawn in good standing because he had a new demanding job, and wanted time to spend with his family.

6.2.1.1.1 Relationship to Antecedent Conditions

Five students were part-time, six full-time. Five were female, six male. Two were international students and four were academic staff members. Two were aged from 23 to 29, four from 30 to 39, four from 40 to 49 and one from 50 to 59. Six were from the Arts Faculty and five from the other faculties. Seven of the 11 students had a typical educational preparation for PhD candidature and three were upgraded from masters to PhD. Only one student had an atypical PhD preparation. This represents higher proportions of slightly older, international or academic staff, and students who had typical educational preparations or masters upgrades than the total sample. Three students had probationary candidature. Nine supervisors were male, two female. Six of the student-supervisor dyads were male-male; three were female-male and two female-female. Although the numbers are small, this is in contrast to previous research. Scroeder and Mynatt (1993) report that studies suggest female students with female supervisors are more satisfied with their supervisors than female students with male supervisors. Three supervisors were professors/heads of departments/directors of centres, two associate professors, two readers, two senior lecturers, one research fellow and one lecturer. This represents academics at higher levels of appointment compared to the total sample. Four supervisors were experienced, three moderately experienced and four inexperienced.

Three students (but none of the supervisors) said the sole purpose of a PhD was to make an original contribution to knowledge. Two students and three supervisors said research

training was the purpose, whilst six students and eight supervisors said both an original contribution and research training. There were identical responses for seven of the 11 dyads.

As for the expectations of the supervisory relationship, as evidenced by responses to the RPRS, these students and their supervisors tended to have high numbers of identical (2-6 out of 11) and similar (3-8 out of 11) responses, and low numbers of opposite (0-3 out of 11) responses. Six of these 11 students and their supervisors had either no opposite responses or only one.

6.2.1.1.2 Relationship to Supervisory Transactions

Six students had only main supervisors; three had main supervisors plus inactive associate supervisors. One of these students also had a defacto supervisor. Two students had two active supervisors; one had a main supervisor plus an active associate supervisor, the other had co-supervisory arrangements. Another student, who was working on part of a group project, had the assistance of a research assistant.

Six of these students chose their supervisors, two students said that their supervisors chose them. One student's supervisor was allocated to her at another university; she followed the supervisor when she changed universities. One student's supervisor was suggested by industry, he felt he had the ability to say no to the supervision had wished. His former supervisor at another university suggested one student's supervisor; he could have said no. All of the students in this satisfied group felt that they had some choice or control regarding their supervisory arrangements. Three students chose their supervisors for academic reasons. One added "mainly", and another said she did not really choose because her supervisor chose her. Seven students chose their supervisors for a combination of academic and interpersonal, working relationship reasons. One said her supervisor chose her. None of the students in this group chose their supervisors solely on the basis of interpersonal reasons. Nine out these 11 students said that the interpersonal working relationships that they developed with their supervisors were important. One said "not very important" and one avoided the question.

Eight students were working on individual PhD topics that they developed with varying degrees of supervisory input. One was working on an individual topic that had been

originally formulated by her supervisor. The other two students were working on group projects that had been developed by their supervisors, although for one of these students the project evolved into an individual one. Six of these students said that their topics were "well matched" to their supervisor's area of expertise. There was a "reasonable match" for the other five, although this changed to "well matched" for one of these students as her project developed. There is a better match between students' PhD topics and supervisors' areas of expertise for this group than for the whole sample.

Three of these students met with supervisory committees to transfer from probationary to full candidature. One said that it went smoothly and he received a moderate amount of helpful feedback. One said that it was a lot of work preparing for the committee meeting, and that this had distracted him from his PhD work. The third withdrew in good standing from his candidature shortly after the committee meeting citing as reasons a new and demanding job and the wish to see more of his family.

Eight of these students initially described their relationships with their supervisors as professional and with good interpersonal aspects. For four of the eight, their relationships with their supervisors improved over time and degrees of personal friendship emerged. Three students and their supervisors said that they had personal friendships and all three dyads maintained these friendships throughout the supervisory process. Thus all students in this group reported positive supervisory relationships. Power issues were not present in any of these 11 relationships.

Three students said that supervisor's supervisor style was "reasonably directive", eight said "non-directive". Five supervisors supervised "closely", three "reasonably closely" with the supervision for the other three "not close". All 11 students described their supervisor's supervisory style as "interactive". This is higher than for the whole sample. Four students and their supervisors met more frequently than monthly, four each month, two less frequently than monthly and one when needed. As previously mentioned, four students complained at some stage that their supervisor was too busy, and that it was difficult to get an appointment or have work returned within a reasonable time. Five students saw themselves as "fairly autonomous", six said that they were "very autonomous". All six students enjoyed being very autonomous.

The supervisor of one of these 11 students was dissatisfied with the student's progress. The supervisor's dissatisfaction was not for academic reasons, but rather the time (or lack of it) devoted by the student to his PhD. This student withdrew from candidature in good standing due to work and family commitments. Four of this group of students had an intermission and five had a temporary change of supervision at some stage during the data collection period for this study. This temporary change was trouble free for two of these students (one had an active associate, a research assistant helped the other), but caused problems and delays for the others. One student from this group experienced a permanent change of supervisor, which was effected smoothly.

It will be remembered that three supervisors in this study were each supervising two students. All three had one student in this group that remained satisfied and one student in the next group who were initially satisfied with their supervision, but changed their positions.

In summary, most students expressed satisfaction with their supervision and their supervisory relationships. In these instances both supervisors and students tended to be giving the researcher consistent information. During their first interview with the researcher, 17 out of 21 of the students expressed satisfaction with their supervision. Three were already dissatisfied to some extent and one was dissatisfied.

Eleven of these 17 students remained satisfied with their supervision throughout the supervisory process. Although satisfied with their supervision, four complained at some point that their supervisor was very busy, and that this detrimental. Five were from the group of seven students who had completed or nearly completed their theses. A further five were from the group of 10 students who were continuing with their thesis work. Only one was from the group of four students who discontinued.

Significant antecedent conditions for this group included that seven of the 11 students had a typical educational preparation for PhD candidature and that three were upgraded from masters to PhD. Only one student had an atypical PhD preparation. This represents higher proportions of students who had typical educational preparations or masters upgrades than the total sample. Three students had probationary candidature. Two were international students. The supervisors of these students were academics at higher levels

of appointment than for the total sample. As for expectations of the supervisory relationship, as evidenced by responses to the RPRS, these students and their supervisors tended to have high numbers of identical (2-6 out of 11) and similar (3-8 out of 11) responses, and low numbers of opposite (0-3 out of 11) responses. Six of these 11 students and their supervisors had no opposite responses or only one.

Significant supervisory transactions include that three of these students had two active supervisors, two as a formal part of their supervisory arrangements and one an informal defacto supervisor. A fourth student, who was researching part of a group project, also had the assistance of a research assistant who was involved with the project. This represents higher levels of supervisory support than the sample as a whole. All of the students in this satisfied group felt that they had some choice or control about their supervisory arrangements. None chose their supervisors solely for interpersonal reasons. There was a slightly better match between students' PhD topics and supervisors' areas of expertise for them than for the sample as a whole. All students in this group reported positive supervisory relationships. All 11 students described their supervisor's style as "interactive". This is higher than for the whole sample. Students enjoyed the levels of autonomy they had negotiated with their supervisors.

The supervisor of one of these 11 students was dissatisfied with the student's progress. His dissatisfaction was not for academic reasons, rather the time commitment of the student to his PhD. This student withdrew from candidature in good standing due to work and family commitments. Five students had a temporary change of supervision at some stage during the data collection period for this study. This temporary change did not cause problems for two of these students (one had an active associate, a research assistant helped the other), but caused problems and delays for the other three. One student from this group experienced a permanent change of supervisor, which was effected smoothly.

Three supervisors in this study were each supervising two students. All three had one student in this group that remained satisfied and one student in the next group of students who were initially satisfied with their supervision, but changed their positions.

6.2.1.2 Satisfied Students who became Dissatisfied

Six of the 17 students who initially expressed satisfaction in relation to their supervision changed their minds over the period of this longitudinal study. One said at the second interview that she was finding out the limits of her supervision. By the third interview she had become completely dissatisfied and changed her supervisor. Another had become despondent about his topic and supervision. After an intermission he had returned with a new topic and was more optimistic about his supervision. Another student had trouble early on, then described what she called a "double-edged sword". Her supervisor was so busy that it was very difficult to see her. But when they met her supervisor was very good. Both student and supervisor worked on this and things improved. Another student had a very good relationship with her supervisor until he went on leave. During this time an inactive associate supervisor stepped in. Problems developed between the student, the associate supervisor and two other academic staff in the department. When her main supervisor returned from leave, the student could not revive the good supervisory relationship. For another student frustration and dissatisfaction developed when she was unable to formulate a suitable topic. She had chosen her supervisor for interpersonal reasons and his area of expertise did not match her PhD topic. She reached the stage that she wanted:

to scream at him ... no that's not what I want to do. There is something here that I want to do, and it's hard, it's going to be hard to actually work out what it is. ... What I really needed I guess was somebody to say look I see what you're trying to do here, you're trying to pick up on this thread and this thread and this thread. And to give me some sense of yes work through that, it's worth doing.

The student had a year's intermission. During this time she worked on an individual ARC project. When she returned both she and her supervisor were optimistic that she could further develop part of the ARC project for her PhD. Another student became dissatisfied with his supervision after an awkward committee meeting that had been convened to transfer his candidature from probationary to full status. He said that his supervisor should have been more directive and met with him more frequently.

The main complaints from this group of six students that became dissatisfied with their supervision were a plea for more detailed guidance, more feedback from their supervisors and more structure to their supervision.

Two of these students have completed or nearly completed their theses, three are continuing their thesis work and one has discontinued.

6.2.1.2.1 Relationship to Antecedent Conditions

Four were full-time and two were part-time students. Four were female, two male. Two were aged from 23 to 29, two from 30 to 39 and two from 50 to 59. None were international students. Four were from the Arts Faculty and two from the other faculties. Three had typical educational preparations for PhD candidature. The other three had atypical preparations. One a non-research honours degree in a discipline new to the academic environment and different from her PhD discipline. Another undergraduate and masters degrees in different disciplines from his PhD discipline (and these earlier qualifications were achieved years ago). The third student has no undergraduate degree and his master by publication is in a discipline new to the academic environment and different from his PhD discipline. There is an over-representation of students with atypical educational preparations in this group.

Four supervisors were males, two females. This resulted in two female-male student-supervisor dyads, two female-female dyads and two male-male dyads. Four supervisors were professors/heads of departments/directors of centres and two were associate professors. Three supervisors were experienced and three moderately experienced. None of this group was inexperienced. This represents higher levels of academic appointment and more experienced supervisors than for the sample as a whole.

Four of the students and one supervisor said that the purpose of a PhD was to make an original contribution to knowledge. One student and one supervisor said research training. One student and four supervisors said both. There was agreement regarding the purpose for three of the six dyads.

Identical (2-4 out of 11) and similar (5-7 out of 11) responses to the RPRS tended to be reasonably high, particularly the similar responses. Opposite responses tended to be low (1-3 out of 11). Only one student-supervisor dyad had three opposite responses.

6.2.1.2.2 Relationship to Supervisory Transactions

Four of these students had a main supervisor. The other two had main supervisors and inactive associate supervisors. Four students said that they chose their supervisors, but

one of these changed this when her relationship with her supervisor deteriorated. She then said that her supervision was allocated and that she had no say in the matter. One said that his supervisor was allocated, but that he could have said no to the supervision. The other student's previous supervisor suggested a replacement when she left the university. The student could have said no. Two students' choices were based solely on academic reasons, one solely on interpersonal reasons and three a combination of both. It was important to all six to have a good interpersonal working relationship with their supervisors. Only one student in this group saw a committee. This was to transfer from probationary to full candidature. The student was concerned about the outcome of this committee, and withdrew from candidature in good standing shortly after the meeting.

All six students were working on individual topics developed largely by them with supervisory input. One eventually developed further an ARC project she had worked on whilst on intermission. Two student's topics were "matched" with their supervisor's area of expertise; three had a "reasonable match". One of these students changed this to "unmatched" as her relationship with her supervisor broke down. For one student there was "never a match", she chose her supervisor for interpersonal reasons.

All of these students initially described their relationships with their supervisors as professional and with good interpersonal aspects. This remained true for only one with four relationships fluctuating and one deteriorating. Power was an issue at some point during the supervisory process for three of these students.

Three students described their supervisors' styles as "reasonably directive" and three as "non-directive". Two said that their supervision was "close", one "reasonably close" and three "not close". Five of the six said that their supervisors had an "interactive" supervisory style. Two students met with their supervisors more frequently than monthly, three each month and one less frequently than monthly. One student complained that her supervisor was too busy and another that her supervisor missed scheduled meetings. Three students said that they were functioning "fairly autonomously", three "very autonomously" which for two of them was a problem. They wanted more guidance and feedback.

The supervisors of four of these six students expressed dissatisfaction with their student's progress. Three students had an intermission, two because the thesis work was not progressing well. Two students had a temporary change of supervision while their supervisor was on leave. This caused problems and delays for both, one student experienced severe difficulties. One student had a permanent change of supervision. After this she progressed rapidly with her thesis and was part of the group who had completed or nearly completed their theses.

In summary, six of the 17 students who initially expressed satisfaction in relation to their supervision changed their minds over the period of this longitudinal study. The main complaints were that they wanted more detailed guidance and feedback and more structure to their supervision. Two are in the group who have completed or nearly completed their theses, three in the continuing group and one has discontinued.

Significant antecedent conditions include three students with atypical educational preparations, including one student who did not have an undergraduate degree. This is an over-representation. None of the six were international students. Their supervisors were generally of higher academic appointment and more experienced than for the sample as a whole. Identical and similar responses to the RPRS tended to be reasonably high. Opposite responses tended to be low.

Significant supervisory transactions include one student basing her choice of supervisor solely on interpersonal reasons. All initially described their relationships with their supervisors as professional and with good interpersonal aspects. But the relationships for four fluctuated and for one deteriorated. Power was an issue at some point during the supervisory process for three students. One student complained that her supervisor was too busy and another that her supervisor missed scheduled meetings. Two complained that their supervisors gave them too much autonomy. They wanted more guidance and feedback.

The supervisors of four of these six students expressed dissatisfaction with their student's progress. Three students had an intermission, in two cases because the thesis work was not progressing well. Two students had a temporary change of supervision

while their supervisor was on leave. This caused problems and delays for both. One student had a permanent change of supervision. After this she progressed rapidly.

6.2.1.3 Dissatisfied Students

Four students were either dissatisfied with their supervision or dissatisfied to some extent from the commencement of data collection for this study.

She just makes sure that there's a really big wall between us, so that I know I am the student and she's like my mother.

He gets himself a bit anxious, and I get a bit anxious and I think we feed off each others', it's not anxiety, but nervousness. ... I'm [supervisor's name] first PhD student, so it's a learning process for him as well I would imagine. ... I don't think you are born to be a supervisor. So he's still learning I suppose, he's a bit uncertain about how to handle things. Also he has got a lot on his plate.

I suppose it's up to me to be more active as a student and push him [supervisor] into assisting me when I need it.

Not like what I expected ... hard for me to explain ... I feel like an outsider. ... I only see him [supervisor] if I have to.

These four students' main complaints were a longing for more detailed guidance and feedback from their supervisors and more structure to the supervisory process. Examples of their comments follow.

I feel as if I'm chasing my tail.

I can count the number of hours we've had in conversation on perhaps two hands. ... As far as my project goes, I've set it up, I've arranged the experimentation. He only knows little details of the actual work I'm doing.

They believed that the amount of time for supervision should be clarified and articulated to both supervisors and students.

... at the end of the day with an academic ... supervision is the easiest thing to let slip a little bit.

Two believed that their supervisors were unhelpful.

I know that I have to work by myself ... but maybe it would be helpful to me if the person [supervisor] ... has some article that can help me?

One student was worried about the absence of any interpersonal aspects to the supervisory relationship; her supervisor maintained a strictly professional academic relationship.

Just that someone will listen to you if you've got a problem. Especially if you've got a personal problem that's ... impinging, somehow affecting your work academically. It can never be just the case that for three years everything's strictly academic.

Another student was concerned that it was his supervisor's first PhD supervision. He doubted his supervisor had the skills to supervise him adequately.

Two students were continuing with their studies, albeit that the supervisor of one student doubted she would complete the thesis. Two students had discontinued their studies without completing their theses.

6.2.1.3.1 Relationship to Antecedent Conditions

Three students were full-time and one part-time. Two were females and two males. One was an international student with severe language difficulties plus cultural adjustments to overcome. Two were enrolled in the Arts Faculty and two in the other faculties. Two were 23 to 29, one 30 to 39 and one 40 to 49. This group is younger than the total sample. Two went directly from second class honours degrees to PhD candidature. One was given probationary candidature. One student had an atypical preparation in that he had undergraduate and masters degrees in a different discipline from his PhD; he was given probationary candidature. The fourth was upgraded from masters to PhD candidature. Her supervisor later regretted this because her progress had thereafter been poor.

One supervisor was female and three were male. This resulted in one female-male student-supervisor dyad, two male-male dyads and one female-female dyad. One supervisor was a professor/head of department/director of centre, one a senior lecturer and two were lecturers. This represents lower academic appointments than for the whole sample. One supervisor was reasonably experienced. The other three were inexperienced. This is significant and represents less experienced supervisors than for the whole sample.

One student said that the purpose of the PhD was research training. The other three students and all four supervisors saw the purpose as a combination of research training and making an original contribution to knowledge.

Identical (2-4 out of 11) and similar (4-8 out of 11) responses on the RPRS for this group were reasonable. What did stand out, however, was that for three of these four students, opposite responses were high (3-4 out of 11), indicating that this group of students and their supervisors had different expectations of the supervisory relationship and process. Whilst the fourth student in this group only had one opposite response to her supervisor, it was in an area that was critical to her, the amount of support a student can expect from a supervisor. Matching seems to be very important to effect a successful supervisory arrangement/relationship. Perhaps the RPRS should be used to indicate problems early in the supervisory relationship.

6.2.1.3.2 Relationship to Supervisory Transactions

Two students had main supervisors, one a main supervisor and an inactive associate supervisor and one co-supervisory arrangements. This was arranged to support the supervisor doing his first PhD supervision. The problem however was that the more experienced supervisor went on leave and no alternative arrangements were made to support the new supervisor and his student. Two of these students chose their supervisors, one for academic reasons only and one for interpersonal reasons only. The other two students supervisors were allocated to them for academic reasons, they had no say in their supervision. This is higher than for the whole sample. It was a problem for the two students because to them the interpersonal aspects of the supervisory relationship were important, and these were missing. One student saw a committee to transfer from probationary to full candidature; this was uneventful. Another student withdrew from candidature just before he was to have met with the committee to have his transfer approved. Another student's supervisor convened a committee because she was dissatisfied with her student's progress. The student's dissatisfaction with her supervision, rather than her academic progress, became the focus of the meeting and her supervision was changed.

Three students were working on individual projects that they had developed. One student was working on a small group project that had been partially developed by his supervisor, but had shifted direction and become an individual project. One student's project was "matched" with his supervisor's area of expertise. The other three students felt that the match was only "reasonable", notwithstanding that two of them had their supervisors allocated to them for academic reasons.

Initially, three of these students described their relationships with their supervisors as professional with good interpersonal aspects. Two qualified this by saying "mostly" and "poor early on". All three were in relationships that deteriorated quickly. The fourth student said that she had a professional relationship with her supervisor that had always had poor interpersonal aspects. This student was a female and international, her supervisor was male. Both gender and cultural influences may have affected this supervisory relationship. Power was an issue for the students in three of these supervisory relationships, higher than for the total sample.

Three students said that their supervisors had "non-directive" supervisory styles and "did not supervise closely". The fourth supervisor was "reasonably directive" and supervised "closely". This is more remote supervision than for the whole sample. Significantly, none of this group of students described their supervisor's style as "interactive". Meetings were held each month for one student and less frequently for the other three students. This represents less student-supervisor contact than for the whole sample. Three of these four students complained that their supervisor was too busy, one saying his supervisor missed scheduled meetings.

One student said that she was working "fairly autonomously", the other three said "very autonomous" which was a problem. They wanted more supervisory advice and guidance.

Two of these students' supervisors were dissatisfied with their students' progress; both of these students had an intermission. One did so when her supervisor took leave because she did not want a second change to her supervision. She had already had a difficult permanent change of supervision prior to the data collection for this study. She said that she was not consulted about this change. Another student's supervisor visited his research students on Fridays whilst he was on leave. This did not meet his student's need for supervision as his supervisor was always pressed for time. Another student experienced a difficult temporary change of supervision when her supervisor was on leave. A committee meeting and a permanent change of supervision followed this. Initially this was a satisfactory supervisory relationship, but lack of progress and ill

health resulted in a poor academic progress report. This student's new supervisor expressed doubts about this student completing her thesis.

In summary, four students were either dissatisfied with their supervision or dissatisfied to some extent from the commencement of data collection for this study. These four students' main complaints were insufficient detailed guidance and feedback from their supervisors, and insufficient structure to the supervisory process. They wanted the time for supervision be clarified and articulated to both supervisors and students. One student lamented the absence of any interpersonal aspects to the supervisory relationship and another was worried that it was his supervisor's first PhD supervision. Two of these students were continuing with their studies. Two students had discontinued.

Significant antecedent conditions include that this group is younger than the total sample. Two came straight from second class honours degrees. One was given probationary candidature. One student had an atypical preparation. He was given probationary candidature. One was upgraded from masters to PhD candidature, which her supervisor later regretted. She was an international student. These students' supervisors were from lower academic appointments than the whole sample. Three of them were inexperienced, having never before supervised a PhD student to completion. This is significant.

Identical and similar responses on the RPRS for this group were reasonable. What did stand out, however, was that for three of these four students, opposite responses were high showing that this group of students and their supervisors had different expectations of the supervisory relationship and process.

Significant supervisory transactions include that two of these students chose their supervisors, one for academic reasons only and one for interpersonal reasons only. The other two students' supervisors were allocated to them for academic reasons. Initially, three of these students described their relationships with their supervisors as professional with good interpersonal aspects. All three were in relationships that deteriorated quickly. The fourth student said that she had a professional relationship with her supervisor, which had always had poor interpersonal aspects. Power was an issue for the students in three of these supervisory relationships.

This group of students generally had more remote and distant supervision. Significantly, none of this group of students described their supervisor's style as "interactive". Three of these four students complained that their supervisor was too busy. One student said that she was functioning "fairly autonomously", the other three said that they were "very autonomous". This was a problem for them; they wanted more supervisory advice and guidance. Two of these students' supervisors were dissatisfied with their students' progress and both of these students had an intermission. Two of these students had difficult temporary changes of supervision.

6.2.2 The Supervisors' Perspective

Most of the 18 supervisors supervising these 21 PhD students enjoyed their supervisory role and put thought and effort into the process. Supervisors raised two main issues about supervision. These were the amount of time to spend with PhD students and the problems related to supervisors' insecurities and anxieties.

6.2.2.1 Time for PhD Supervision

Eight of the 18 supervisors expressed concerns about how much time to spend with PhD students. They said that their other workloads had increased over the duration of this longitudinal study, and finding enough time for supervision was hard. Four of these supervisors' students had complained that their supervisors were too busy. Two of these supervisors had missed scheduled meetings with their students.

[It is] simply a matter of complete over-work.

We are all working far too much. ... In the long run it probably won't be in the interests of quality of either research or teaching.

[Student's name] is hoping to submit before the end of the year. This might be a bit ambitious. Mainly because we [co-supervisors], with all that is going on, haven't had a chance to read [student's name] most recent draft.

The only thing I [supervisor] don't have is as much time as I would like to work with him [student].

Sometimes I'm [supervisor] very busy and he may not get quite the access to me when he [student] ... really needs my urgent help.

Two supervisors complained that the associate supervisor role was merely nominal. Workloads were high, and there were not enough supervisors to go around.

The other difficulty is that there aren't enough people [supervisors] to go around to make associate supervisors compulsory viable. ... use it [associate supervisors] as a fall back position.

Three of these supervisors were professors/heads of departments/directors of centres, two were associate professors and three senior lecturers. This represents academic staff at higher appointments than for the sample as a whole. Three were experienced supervisors, one moderately experienced and four inexperienced. Inexperienced supervisors are slightly over-represented in this group. These eight supervisors were supervising 11 students participating in this study. Five of the students had had a typical educational preparation for PhD candidature, two were upgraded from master's degrees, and four had atypical educational preparations. This represents a higher proportion of students with an atypical educational preparation than for the sample as a whole.

6.2.2.2 Supervisors' Insecurities and Anxieties

Seven supervisors raised the issue of supervisors' insecurities and anxieties, particularly where a student was not making progress. Four of these supervisors had expressed dissatisfaction with their student's progress. Two were worried about their student's academic ability. One supervisor felt this was especially important when students were on scholarships. Another supervisor highlighted the problems for a new supervisor.

[We] haven't touched on, in any of this questioning, the issues of the supervisor's insecurities, and the supervisor's anxieties. Because it's very clear that people setting out to engage on supervision for the first time are as unsure themselves about what they should be doing as the students are. And when you put two very insecure, unsafe persons together ... it's not good. ... So one of the first pieces of advice I always am prepared to give a new supervisor is don't touch anything you don't feel confident about supervising. ... The other thing is to always stress the need to actually watch for the signs while you're supervising people: to read their bodies, to read their faces, to read the way they're communicating with you, to know whether you're actually communicating well or not. ... And to be flexible is one of the bits of advice I give all the time. ... Why do you [supervisor] actually need to insist that this work be done this way? ... You are after all responsible for the product, so it must be done well in the end. But if the student is going to take three goes at getting this right, ... don't panic them by insisting on what you think needs to be done.

This supervisor suggested a mentor system for new supervisors. Other supervisors expressed their own insecurities and anxieties.

I told [student's name] it was bullet-biting time. ... worried about this in relation to my relationship with her. Was this the best way to handle the situation? Was it gearing her up or off-putting and depressing?

It's possible that the complex of some of these factors makes the fact that there is a bit of tension between us more stressful for her [student] than it is for me [supervisor]. It certainly though is stressful for me because I don't like the situation. And it's difficult for, me given my personality, not to say to her you bloody well better get on with it. I've tried to say that in a polite and reasonable way. But I don't like the fact I have to do that. In fact I'm very much looking forward to this whole situation ceasing.

It really, it upset me [supervisor] a little bit.

I'm not experienced enough to know where that work [student's work] will lead in a form which everyone's going to be happy about for a PhD.

Three supervisors expressed concern about taking on students with minimal qualifications.

I have a worry that the university and/or the department has an attitude that if they've [students] got a minimum qualification of some sort, then we'll [supervisors] get them through a higher degree, and feel an obligation to get them through.

Three of the supervisors in this group of seven were professors/heads of departments/directors of centres; there were also an associate professor, a senior lecturer and two lecturers. Only one of the supervisors was experienced, three were moderately experienced and three inexperienced. These supervisors supervised eight students from this study. Five students had a typical educational preparation for PhD candidature, one was upgraded from a master's degree, and two had atypical preparations.

In summary, most of the 18 supervisors supervising these 21 PhD students enjoyed their supervisory role and had worked hard at it. Supervisors raised a number of issues: the amount of time to spend with PhD students and the problems of supervisors' insecurities and anxieties. Eight of the 18 supervisors wondered about how much time to spend with PhD students. They said that their other workloads had increased over the duration of this longitudinal study, and finding enough time for supervision was difficult. Two supervisors raised the issue of the associate supervisor role only being nominal. These supervisors represent academic staff at higher appointments than the sample as a whole. Inexperienced supervisors were slightly over-represented in this

group. They were more likely to be supervising students with an atypical preparation. Seven supervisors raised the issue of supervisors' insecurities and anxieties, particularly where the student was struggling. Another supervisor highlighted the problems of new supervisors and suggested a mentor system for them.

6.2.3 Summary

The findings in relation to students' satisfaction with supervision are summarised in Table 4 and Table 5. Table 4 contains the students' satisfaction in relation to antecedent conditions. Table 5 contains the students' satisfaction in relation to the supervisory transactions.

Table 4 - Students' Satisfaction with Supervision and Significant Antecedent Conditions

Antecedent Conditions	Satisfied students (11 students)	Satisfied students who became dissatisfied (6 students)	Dissatisfied students (4 students)
Students			
Enrolment status	More part-time	More full-time	More full-time
Gender	-	More females	-
Age	Slightly older	-	Younger
International	2	0	1
Academic staff	4	1	0
Education	Mostly typical	Varied	Varied
Probation	3	1	2
Directly from U/G	1	0	2
Supervisors			
Gender	More males	More females	-
Level of appointment	High	Highest	Lower
PhD supervision experience	Varied	Experienced	Inexperienced and 1 st PhD supervision for one
Both			
Faculty	-	More Arts Faculty	-
Purpose of PhD	-	-	-
Expectations of supervisory process (RPRS)	High numbers of identical and similar responses, low numbers of opposite responses	High numbers of identical and similar responses, low numbers of opposite responses	Lower numbers of identical and reasonable numbers of similar responses, higher numbers of opposite responses

Table 4 identifies some trends in relation to students' satisfaction with supervision and antecedent conditions. Satisfied students tended to be part-time, slightly older, international students or academic staff, and have had a typical educational preparation for PhD study. Their supervisors were more likely to be male, from high levels of academic appointment, and with some PhD supervisory experience. By contrast, dissatisfied students were likely to be full-time, young and straight from undergraduate study. The dissatisfied students had varied educational backgrounds for PhD study. The two with typical preparations had second class honours degrees. A greater proportion of these students was given probationary candidature. Their supervisors were from lower levels of academic appointment and as PhD supervisors were less experienced. It appears that more senior academic staff and experienced supervisors have skills that make supervision a more satisfying experience for students. The students who were initially satisfied with their supervision, but who became dissatisfied at some stage, had supervisors from the highest levels of appointment, and who were also the most experienced. It is likely that this is what saved these students from becoming part of the dissatisfied group. These students were more likely to be full-time, female, from the Arts Faculty, and as with the dissatisfied group, they had varied educational backgrounds. Seagram et al. (1998) and Haksever and Manisali (2000) found that male graduates were more satisfied with the quality of supervision they received than were females. This is consistent with the findings of the current study.

Students' and supervisors' beliefs about the purpose of PhD study did not yield differences between the three groups. Differences between the satisfied and satisfied/dissatisfied groups, when compared with the dissatisfied group, about expectations of the supervisory process (responses to the RPRS) will be discussed at the end of this chapter in the Chapter Summary.

Table 5 - Students' Satisfaction with Supervision and Significant Supervisory Transactions

Supervisory Transactions	Satisfied students (11 students)	Satisfied students who became dissatisfied (6 students)	Dissatisfied students (4 students)
Supervisory arrangements	Four students had 2 active supervisors (2 formally, 2 informally)	All students had only one active supervisor	All students had only one active supervisor
Students chose supervisor (Interpersonal only)	6 0	4 1	2 1
Students felt they had choices	11	5	2
Topics/projects	Mostly individual	All individual	Mostly individual
Match with supervisor's area of expertise	Close	Varied	Reasonable
Committee attendance for probationary to full candidature	3 (1 went well, 1 found preparation distracting, 1 withdrew after)	1 (withdrew after)	2 (1 withdrew before and 1 uneventful)
Supervisory relationships	All positive	Mostly fluctuating	Poor or deteriorating
Power was an issue for student	0	3 (at various stages)	3
Supervisory style <ul style="list-style-type: none"> • Direction • Closeness • Non-directive and not close • Interactive 	Mostly non-directive Mostly close 2 All	Varied Varied 2 All but one	Non-directive Not close 3 None
Meetings	Frequent	Varied	Infrequent
Supervisor too busy	4	2	3
Supervisor regarded supervision as teaching	Mostly	Varied	Varied
Autonomy development	Positive	2 complaints of too much autonomy	3 complaints of too much autonomy
Supervisor complaints of students progress	1 (related to time commitment only)	4	2

Intermission	4	3	2
Change of supervisor			
• Temporary	5 (problematic for 3)	2 (both problematic)	3 (all problematic)
• Permanent	1 (supervisor left the university)	1 (student initiated)	1 (committee initiated)
Wanted more structure to supervision	Low	High	Very high
Wanted more detailed guidance and feedback	Low	High	Very High
Completed thesis	5	2	0
Ongoing students	5	3	2
Discontinued	1	1	2

Table 5, like Table 4, reveals some trends. Satisfied students were more likely to have two active supervisors and to believe that they had choices regarding their supervisory arrangements. Their topics tended to be matched with their supervisor's area of expertise. Committee meetings to transfer probationary to full candidature generally went well, although one student found the preparation distracted him from his thesis work and another withdrew from candidature shortly afterwards. His supervisor was only concerned about his progress time wise. He had no criticism of his student's ability.

All students in the satisfied group reported positive supervisory relationships with power issues not a concern. Goulden (1991) has previously found that the majority of students saw the relationship with their supervisor as important or very important in determining whether the overall experience was satisfactory or not. More recently Aguinis, Nesler, Quigley, Lee and Tedeschi (1996) used French and Raven's (1959) taxonomy to investigate systematically power in graduate supervisor-student relationships. They had a 35.78 percent response rate to a mailed questionnaire survey sent to 967 graduate students. Similarly to the current study, they found that graduate students' perceptions of their supervisors' power are linked strongly to their perceptions of quality of the professor-student relationship.

Supervisors of satisfied students had styles that were mainly "non-directive", but their supervision was usually "close" and all students in this group reported that their supervisor's style was "interactive". Supervisory meetings tended to be held frequently, autonomy development was considered positive, and their supervisors were more likely to regard supervision as teaching. Also, the satisfied students were from the completed or ongoing student groups. The one exception was the student who had withdrawn for work and family reasons.

As for dissatisfied group, of particular note are the poor or deteriorating supervisory relationships and the prevalent of reports of power issues. Supervision was "non-directive", "not close" and "not interactive". Meetings were infrequent. In the previously reported Acker et al. (1994) study some students were unhappy with a non-directive style and wanted more direction. This taught these students to be assertive, seek help elsewhere or be better organised. In the current study there were examples of dissatisfied students using all three mechanisms.

The dissatisfied students felt they were given too much autonomy, and wanted more structure to their supervision with more detailed guidance and feedback. Student dissatisfaction with supervisory guidance has previously been identified (eg, Barrett et al., 1983; Haksever & Manisali, 2000; Nightingale, 1984; Powles, 1988a, 1988b, 1989, 1994). Also Pole et al. (1997) after conducting detailed interviews with doctoral student and their supervisors in three natural science disciplines in nine universities in England found students wanted a more structured approach to supervision.

None of the dissatisfied students in this study had completed their theses. In relation to the antecedent conditions, the group was more likely to have varied educational backgrounds for PhD study. The two students who had typical preparations had second class honours degrees. A greater percentage of these students were given probationary candidature. Their supervisors were from lower levels of academic appointment and were less experienced PhD supervisors. From this study it is not possible to say whether this group of students' expectations of supervision and of supervisors was exceptionally high, or whether they would have benefited from supervisors higher levels of appointment and with more experience. Kam (1997) looked at students' expectations of their supervisor and their satisfaction with supervision. Kam used 250 responses to a

mailed questionnaire that was sent to 932 postgraduate research students. He found that the total time of meetings in an academic year, a relaxed ambience during meetings, a sympathetic and caring attitude by supervisors along with familiarity with the research area, all improved the quality and student satisfaction of the supervision. However he concluded "how well a supervision process is rated depends on how much responsibility a student assumes" (p. 101).

Certainly the satisfied students who became dissatisfied at various stages benefited from experienced supervisors from high levels of appointment. This is probably why these students did not become totally dissatisfied. As with the dissatisfied group, they had varied educational backgrounds. Otherwise this group was somewhere between the satisfied and dissatisfied group on most indicators. It is noteworthy that neither student who chose their supervisor solely for interpersonal reasons was satisfied with their supervision.

Supervisor business was spread across the three groups with higher proportions of complaints from the dissatisfied groups. The question of supervisor time and availability will be discussed in the Chapter Summary. Problems associated with a temporary change of supervision were apparent for the three groups with a higher percentage of concerns expressed by the dissatisfied group.

Welsh (1978) found that at the end of first year, about half the students in her study expressed concerns, either mild or serious, regarding the quality of their supervision. This is similar to the findings of this study. Welsh (1978) also found that the main source of dissatisfaction, especially for the seriously dissatisfied, was the quality of the supervisory relationship. After continuing the study for a further two years the causes of dissatisfaction also incorporated supervisor expertise, contact and supervisory methods (McAleese & Welsh, 1983). They also found that the emphasis changed from supervisory relationships in the first year to expertise and regular contact in second and third years. These are similar to the areas of student dissatisfaction identified here but the changes in emphasis over time were not clearly evident. Students in this study wanted quality supervisory relationships plus supervisory expertise, involvement and contact throughout the research process, and particularly when they had a problem. McAleese and Welsh (1983) contrasted satisfaction with supervision between students

who had submitted their theses and students who had not. Thirty-four percent of students who had submitted were unhappy to some degree with their supervision, compared with 64 percent of those who had not yet submitted. Although the numbers in this study are low, similar differences are apparent. Some level of dissatisfaction rises from 28.5 percent in the completed thesis group to 50 percent in the ongoing student group and 75 percent for the discontinued students.

Rudd (1975) estimated that 20 to 25 percent of students were rightly or wrongly seriously dissatisfied with their supervision. This is a similar percentage to the dissatisfied group in this study. The reasons Rudd identified were the negligent or neglectful supervisor; personality clashes; poor quality supervision; inexperienced supervisors; and supervisors who were willing but lacked time. The issues for the dissatisfied students in this study were similar, although students regarded their supervision as nominal or neglectful (rather than their supervisors as negligent). Similar to Rudd (1975), supervisors who were willing, but lacked the time, were more likely to be Heads of Departments with multiple responsibilities.

Most supervisors enjoyed supervising PhD students and put thought and effort into their supervision. However some supervisors satisfaction was influenced by the time required to supervise effectively, and their own insecurities and anxieties. Particular concerns were that academic workloads had increased over the duration of this longitudinal study, and finding enough time for supervision was difficult. The role of associate supervisors was also questioned. Some supervisors were concerned about what to do when their students were floundering. Another supervisor was concerned about the new supervisor and suggested a mentor system for new supervisors.

6.3 Chapter Summary

This chapter, Chapter 6 Outcomes, has presented the findings relating to the outcomes of the PhD supervisory relationship and process for the 21-student-supervisor dyads that participated in this longitudinal study. These findings were presented under the following headings:

- Thesis progress; and
- Satisfaction with supervision.

There was some overlap between thesis progress and satisfaction with supervision. Nearly 72 percent of the completed thesis group were satisfied with their supervision. The remaining 28.5 percent were dissatisfied at times; none was completely dissatisfied. Fifty percent of the ongoing group was satisfied with their supervision. The balance of the ongoing group was either dissatisfied at various stages (30%) or dissatisfied (20%). The only satisfied student in the discontinued group was the student who discontinued for work and family reasons. The others were either dissatisfied at stages or dissatisfied throughout. Thus the completed group was generally satisfied, the ongoing group had varying levels of satisfaction and the discontinued group was mostly dissatisfied with their supervision.

Both the completed thesis and satisfied groups were more likely to have two active supervisors. Holloway (1995) argued for two supervisors saying that one could have expertise in the research method, the other specialist knowledge, that is, complementary roles. She said this provided continuity of supervision for the student when one supervisor was ill or absent, and support for supervisors. Both these points are very important. A temporary change of supervisor was a problem for nearly all the students in this study who had this experience, even those in positive supervisory relationships and who were satisfied with their supervision. Having another person take over who was known to the student and already familiar with the student's thesis work, plus the possibility of contact with the regular supervisor, prevented problems developing for two students. Pearson (1996) also found that students receiving regular supervision from more than one supervisor indicated higher levels of satisfaction with overall supervision than students with only one supervisor. Bournier and Hughes (1991), after articulating both the problems and positive aspects of joint supervision, concluded that there were tangible outcomes of joint supervision for the student, supervisor and university when joint meetings were held on a fixed schedule of meetings with the student providing an agenda. One of the reasons Cullen et al. (1994) advocated supervisory panels was to alleviate problems that arise through changes of personnel. As supervisory panels were not part of the supervisory arrangements for any of the students in this study, it was not possible to evaluate their role. Regarding support for supervisors, this is also important, especially for inexperienced supervisors or

supervisors who have students who are struggling. This study shows that supervisors in these situations would have benefited from the support of a second active supervisor.

Completed and satisfied students' research areas were more likely to be matched with their supervisor's area of expertise. Previous research has demonstrated the importance of this (eg, Donald et al., 1995; Holdaway et al., 1995; Marsh, 1972; Powles, 1993). It was important for students to feel that they had choices about their supervision, the dissatisfied students felt they had the least choice. Some supervisors in the Holdaway et al. (1995) study favoured involving students in the selection of supervisors. But making such a choice solely for interpersonal reasons should be avoided. Both of the students in this study who chose their supervisor solely for interpersonal reasons had problems. One was unmatched with her supervisor topic wise and therefore was unable to have the academic discussions with him that she wanted and needed. This student was in the ongoing and dissatisfied at various stages groups. The other student's supervisor was very inexperienced and the supervisory relationship was beset with problems. This student was in the discontinued and dissatisfied groups. Manderson (1996) cautioned students to attend to their intellectual rather than their personal needs when choosing a supervisor. He also warned against trying to convert the supervisory relationship into a friendship.

Positive supervisory relationships existed for the completed thesis group and were highest for the satisfied student group. Power issues within the supervisory relationships were low for the completed group and non-existent for the satisfied group. It appears that good supervisory relationships are linked to shorter completion times, higher completion rates, and greater student satisfaction with the supervisory process. This is consistent with previous research (eg, Aguinis et al., 1996; Friedman, 1987; Goulden, 1991; Jacks et al., 1983; Moses, 1985; Rudd, 1985; West et al., 1988).

The amount of supervisory support with direction, closeness of supervision, frequency of meetings, plus an interactive supervisory style were also linked to thesis completion and satisfaction with supervision. Completing and satisfied students reported close supervisory involvement and interactive supervisory styles. This is consistent with previous research (eg, Holdaway et al., 1995; Moses, 1992b; Powles 1989; Wright & Lodwick, 1989). The discontinued and dissatisfied groups reported the least supervisory

involvement and with less interactive supervisory styles. Complaints of students being given too much autonomy were also high for these two groups. These students wanted more structure to their supervision and more guidance from their supervisors. This is consistent with previous research (eg, Acker et al., 1994; Barrett et al., 1983; Battersby & Battersby, 1980; Haksever & Manisali, 2000; Nightingale, 1984; Pole et al., 1997; Powles, 1988a, 1988b, 1989, 1994; Rudd, 1975). Supervisors in the Holdaway et al. (1995) study articulated the importance of providing a balance between the supervisor's direction and student's independence. Delamont et al. (1998) called this "creating a delicate balance" (p. 157). They found that supervisors' "current practices are based on a perceived tension: between the need to guide and structure doctoral work on the one hand, and the desire to preserve the doctoral student's autonomy on the other" (p. 170). Delamont et al. (1998) continued that the more tightly framed arrangements nowadays associated with policies to decrease completion times and increase completion rates created new tensions and dilemmas. This is consistent with the findings from this current study.

Whilst students' education backgrounds did not appear to effect thesis progress, students with atypical backgrounds and second class honours degrees tended to be dissatisfied at various stages or completely dissatisfied with their supervision. It is likely that these students needed more supervisory involvement and guidance than those students who had a typical educational preparation, and when this did not occur, dissatisfaction set in. Also the dissatisfied students had inexperienced supervisors from lower levels of academic appointment, which can hardly have helped. They may have benefited from supervisors that were from higher levels of appointment and more experienced.

Supervisor business and availability was a concern to many students and supervisors. Supervisors were having increasing difficulty finding time for supervision over the course of this longitudinal study. Students complained of supervisor business, problems with arranging meetings and delays in receiving feedback on written work. These students were not just those that were dissatisfied with their supervision; many were satisfied. One of the associated problems outlined by O'Brien (1995) is "that supervision demands the commitment of scarce academic time for which the rewards

under the present system are inadequate compared to the potential gains from the allocation of time to personal research and consultancy" (p. 4).

Supervisors' and students' expectations of the supervisory relationship and process as evidenced by responses to the RPRS were associated with the outcomes. Supervisors and students from the completed and ongoing thesis groups, plus satisfied and dissatisfied at various stages groups tended to have higher numbers of identical and similar responses and lower numbers of opposite responses on the RPRS. Both the discontinued and dissatisfied groups tended to have lower numbers of identical and similar responses, and in particular, higher numbers of opposite responses. These findings are displayed in Table 6 and Table 7.

Table 6 - Students' and Supervisors' Responses to the RPRS and Thesis Progress

	Completed and nearly completed theses (7 students)	Ongoing PhD supervisory relationships and theses (10 students)	Students who had discontinued PhD study (4 students)
Range of Identical Responses	2 - 5	2 - 6	2 - 3
Range of Similar Responses	5 - 8	3 - 8	4 - 6
Range of Opposite Responses	1 - 3	0 - 3	3 - 4

Table 7 - Students' and Supervisors' Responses to the RPRS and Satisfaction with Supervision

	Satisfied students (11 students)	Satisfied students who became dissatisfied (6 students)	Dissatisfied students (4 students)
Range of Identical Responses	2 - 6	2 - 4	2 - 4
Range of Similar Responses	3 - 8	5 - 7	4 - 8
Range of Opposite Responses	0 - 3	1 - 3	3 - 4

It appears that when students and supervisors have different expectations at the outset about aspects of the supervisory relationship and process, it increases the likelihood of non-completion or dissatisfaction. Kam (1997) also found that "mutual understanding of

role expectations is crucial to the success of the supervisory process" (p. 81). Likewise Aspland et al. (1999) after conducting a series of faculty-based student and supervisor focus groups at the Queensland University of Technology. They found that students and supervisors "expressed a preference for sharing understanding about supervision and reaching agreement over fundamental expectations and responsibilities with one another early in the candidature" (p.131). One of the strategies they developed to facilitate this was the use of a version of Moses' RPRS (that was adapted by Ryan and Whittle, 1995) by students and supervisors at six monthly intervals to assist them "to share, discuss, and reach agreement about fundamental expectations and responsibilities" (p. 132).

This completes the result chapters for this study. The next chapter, Chapter 7 will present a summary of the findings from this study along with conclusions and recommendations.

Chapter 7 – Summary, Conclusions and Recommendations

The main research question examined by this study was:

What patterns are evident in the relationships PhD students and supervisors develop and the ways they work together?

The subsidiary questions were:

1. What types of supervisory relationships are developed and maintained between PhD students and their supervisors?
2. How are supervisory style, autonomy and power negotiated and managed between PhD students and their main supervisors during the PhD supervisory process?
3. Are supervisory relationships, supervisory style, autonomy and power interrelated, and do they effect the outcomes of the supervisory process?
4. Are there features that are characteristic of particular student and/or supervisor groups, eg, part-time students, women, international students, older students, different disciplines, inexperienced supervisors?

The previous three chapters have presented the findings from this longitudinal study. Stake's (1967) educational evaluation framework provided the organisation for these findings. Chapter 4 presented the antecedent conditions that the student and supervisor participants brought to the PhD supervisory process. Chapter 5 presented the transactions that occurred during the supervisory relationship and process. Chapter 6 presented the outcomes and analysed them in relation to the antecedent conditions and supervisory transactions.

This chapter, Chapter 7, will present a summary of the findings. The study's limitations, conclusions and recommendations will follow and some final thoughts from the researcher. The format for the summary will loosely follow the subsidiary questions, outlined above. The headings for the summary are:

- Supervisory arrangements and relationships;
- Supervisory style and student autonomy;

- The interrelationship of the supervisory relationship, power, supervisory style and autonomy; and the effects on the outcomes of the supervisory process; and
- Characteristic features of particular student and/or supervisor groups.

7.1 Summary

7.1.1 Supervisory Arrangements and Relationships

A variety of informal processes were used to allocate supervisors to students. Most students in this study had only one active supervisor. Although many students had associate supervisors, these associate supervisors usually only became involved in the supervision if the supervisor went on leave. Some supervisors expressed concern about the associate supervisory role being “nominal”, but said that there were simply not enough supervisors to go around.

The relationships that the students and supervisors developed varied from personal friendships to professional relationships with poor interpersonal working aspects. This is consistent with previous research (see eg, Acker et al., 1994; Moses, 1985; Wright & Lodwick, 1989). A good working supervisory relationship was important to almost all students and supervisors in this study. This importance, particularly for students, has previously been articulated (see eg, Elton & Pope, 1989; Friedman, 1987; Goulden, 1991; Harnett, 1976; Heiss, 1970; Jacks et al., 1983; Katz & Harnett, 1976; Moses, 1981a, 1985; Phillips & Pugh, 1987, 1994; Welsh, 1978, 1979; Wilson, 1980). There was evidence that supervisors developed different relationships with different students. Three of the supervisors in this study were supervising two students. All three had relationships that were categorised differently for the two students³⁴.

Three student-supervisor dyads had personal friendships that lasted throughout the data collection period (November 1995 to October 1998). Some of the students and supervisors in this study, plus previous research, have suggested students and supervisors were, or should be, wary of personal friendships (Acker et al., 1994; Heiss, 1970; Manderson, 1996; Moses, 1981b, 1984). However, the evidence from this study is

³⁴ This categorisation of supervisory relationships occurred in Chapter 5 in section 5.3.

that several students and supervisors were willing to engage in personal friendships, and did so successfully. Two of the dyads were female-female, the third a female student and a male supervisor. None of the personal friendships were male-male dyads although they accounted for almost half of the dyads in the study.

Most students and supervisors initially reported professional relationships with good interpersonal working aspects. However changes occurred over time for many dyads. Four relationships improved and varying degrees of personal friendship developed. Reasons for this were the development of trust, working together closely and occasional interactions over coffee or lunch. These improving relationships involved three male-male dyads and one female-male student-supervisor dyad. Two international students developed improved relationships with their supervisors. Whilst this was important to both these students, it was of paramount importance to one of them.

Relationships for some students fluctuated. Reasons for fluctuating relationships included students and supervisors different expectations of the supervisory relationship and process, methodological differences and poor topic matching. Negotiation and renegotiation between students and supervisors prevented these relationships from deteriorating.

Relationships did deteriorate for some dyads. Reasons for this were similar to those for fluctuating relationships. However in the deteriorating relationships negotiation and renegotiation either did not occur or were unsuccessful. The importance of being able to negotiate agreement throughout the research period has previously been identified (Taylor, 1976; Walford, 1981). The combination of young students with questionable academic preparation for PhD and inexperienced supervisors was evident in the deteriorating relationships. The reason for this is probably twofold. It is likely that young students with questionable academic preparation lack confidence and need more supervisory assistance. Accordingly they have greater expectations of their supervisors and the supervisory relationship. It is probable that the supervisor's ability to negotiate and renegotiate the supervisory relationship is learnt and comes with experience.

One student had only a professional relationship with her supervisor and the interpersonal working aspects of the relationship were always poor for her. There

appeared to be multiple reasons for this: gender, culture, verbal and written language difficulties, educational preparation, personality and the fact that her supervisor was dissatisfied with her progress. A feature of the fluctuating, deteriorating and poor supervisory relationships was that students and supervisors were providing different accounts, generally with the supervisor's account being more positive than the student's. This phenomenon has previously been identified (Powles, 1988b, 1994; West et al., 1988).

Emotions were evident at various stages in most of the supervisory relationships. When things were going well, eg, a publication, conference presentation, PhD awarded, these emotions were positive, eg, joy, pride and satisfaction. However when things were otherwise, anger, distress, frustration, sadness and/or depression were apparent. Supervisors as well as students displayed strong emotions. Most supervisors, as they considered how to manage the supervisory relationship and process, exhibited deep concern. The emotional dimension of the supervisory relationship has been highlighted by previous authors (eg, Connell, 1985; Hockey, 1995; Katz & Harnett, 1976; Lowenberg, 1969; Madsen, 1983; Osborne, 1998; Phillips & Pugh, 1987, 1994). In this study the depth and intensity of some of these emotions are clearly demonstrated in the supervisor and student participants' own words, and with the reasons for them. Negative emotions drained students' and supervisors' energy, and took valuable time away from thesis work. Generally, supervisors were able to move on from negative emotions more quickly than their students were.

Most students felt that there were no power issues in their supervisory relationships, and that student and supervisor factors contributed to this. These factors included collegial and more personal relationships, the personalities of the students and supervisors, the age and professional standing of some students and that supervision was a matter of expertise rather than power. In 1995 Evans pointed out that supervisors needed a shift in perspective when supervising mature students with established careers and treat students as colleagues. Some supervisors acknowledged that they took particular action to minimise power relations. These actions included giving suggestions rather than commands, being supportive but not demanding, and having meetings in congenial spots, eg, over cups of coffee. Kam (1997) also acknowledged the benefits of a relaxed ambience during meetings. However for some students, power issues within their

supervisory relationships caused them concern. Reasons included a lack of student confidence, academic games, publication disputes and poor student progress. Descriptions used by supervisors and students tended to denote different power relationships between supervisors and students. Those in equal, more collegial relationships used words like “marriage”; those in more hierarchical or power relationships used words like “parenting” and “mother”. Osborne (1998) talked about unresolved psychological issues for supervisors and students, and highlighted that a supervisor can unwittingly take on a parental role dealing with a difficult child. Lowenberg (1969) also likened the student to be in the impotent position of a dependent child in relation to the power imbalance in the supervisory relationship. He saw differences for students who had been independent. This was generally the case for the students in this study. Many of the students were older and independent, but these students were only slightly less likely to report power issues within their supervisory relationships.

It was important for both students and supervisors in this study to feel that they had choices about supervision. Student concerns centred on the fact that they wanted a supervisor that they related to and were able to work with. This was more important to most students than a topic match. Previous research has also indicated the importance of the interpersonal working dimension of the supervisory relationship (see eg, Brown & Atkins, 1988; Delamont & Egglestone, 1983; Elton & Pope, 1989; Fraser & Mathews, 1999; Harnett, 1976; Hockey, 1991, 1994; Moses, 1981a, 1984; Phillips & Pugh, 1987, 1994; Powles, 1993; Rudd, 1975; Salmon, 1992; Walford, 1981; Welsh, 1983; Wright & Lodwick, 1989). Ideally, students in this study wanted to be matched with their supervisors in areas of positive interpersonal working relationship, topic expertise and research methods. The importance of a topic match has already been demonstrated (eg, Donald et al., 1995; Holdaway et al., 1995; Kam, 1997; Marsh, 1972; Powles, 1993). Different practices are evident in this study and the literature regarding students choosing their supervisors. Phillips and Pugh (1994) while providing students advice on how to choose your supervisor, admitted that in general students do not select their supervisors, they are allocated by the department. Some supervisors in the Holdaway et al. (1995) study favoured involving students in the selection of supervisors. In Norway students generally choose a faculty member and ask that person to supervise them (Smeby, 2000).

Supervisors were concerned about being asked to supervise poorly prepared students or students whose topic differed from their area of expertise, and about personality clashes. Supervisors in the Acker et al. (1994) study were also concerned about taking on supervision when their knowledge of the subject area was limited.

Choices regarding supervision before formal supervisory arrangements were put in place, and if the relationship was not working, were both regarded as important. Problems associated with this are acknowledged. Students may all want the same supervisor who would then be overloaded. There may be only one supervisor with the appropriate expertise or only one member of the dyad may consider that the relationship is not working. In some disciplines a change of supervisor means changing projects. Nevertheless, several students and supervisors advocated for an easier way of changing supervisors if the student was unhappy with their current supervisory arrangements. They wanted some mechanism put in place to facilitate this. One student and supervisor in this study underwent a supervisory change that was traumatic and very distressing for both parties.

7.1.2 Supervisory Style and Student Autonomy

Supervisory styles varied from “reasonably directive” and “close” to “non-directive” and “not close”. This is consistent with previous research (Moses, 1984). Generally supervisors thought that they provided more direction than their students did. The frequency of meetings varied, and, as would be expected, full-time students had more frequent supervisory meetings than part-time students did. Most students reported that their supervisors had “interactive” supervisory styles. An interactive supervisory style includes guidance, advice, suggestions, discussion, negotiation and support. Final choices or decisions after discussion and negotiation were generally left to students. This interactive supervisory style was important to students, and strongly associated with good working supervisory relationships.

Supervisors based their supervisory styles primarily on their assessment of individual students’ abilities, specific needs, personalities and motivation. The stage of the thesis was an influence. Other factors were the way they themselves were supervised, their philosophies and beliefs about supervision and teaching, their previous experiences

supervising students, and the current context where there are financial incentives for decreasing completion times and increasing completion rates. This is similar to previous research (Burgess et al., 1994). They found that supervisors adopted a flexible approach to supervision based on their assessment of the intellectual ability and expertise of the student, the supervisor's own doctoral experience and the stage of the research. When supervisors in this study had been happy with their own supervision experiences, they tended to model their styles on those of their supervisors. Supervisors who were dissatisfied with their supervisee experiences adopted styles that were opposite to their supervisors. Generally their dissatisfaction related to remote supervision, and they tried to provide their students with more guidance and support. Some supervisors were between these two extremes and adopted those supervisory practices that they found beneficial, whilst discarding those practices that were unhelpful. This phenomenon of basing supervision on one's own supervision was also identified by Delamont et al. (1998). Various philosophies about supervision, particularly relating to student independence or autonomy, and whether supervision incorporated teaching, also determined supervisory style. Supervisors had learnt how to supervise on-the-job from previous experiences supervising PhD students. Current government and university policies were influencing some supervisors to provide greater direction in an effort to comply with such policies. This worried some supervisors in relation to student creativity, autonomy and independence, and has been identified as a concern in the United Kingdom (Acker et al., 1994; Delamont et al., 1998; Hockey, 1995, 1996b).

Supervisors said that they changed their supervisory styles at different stages of the research process for a particular student, and for different students. The evidence from student accounts in this study is that often this did not happen. Students, who were unhappy with their supervisor's style and negotiated a change, invariably found that the change either did not occur at all or that it occurred temporarily and then supervisors reverted to their original style. Three supervisors were supervising two students. As reported before they all had different relationships with each of their students. However, in all three cases, both students reported the same supervisory styles for the supervisor as to the amount of direction provided and the closeness of supervision. There were minor differences in the frequency of meetings. It appears that supervisory style is consistent and largely immutable. Previous research varies on this. Moses (1981a, 1984) advocated that supervisors should to some extent vary their style to accommodate the

needs of different students undertaking different projects, and for the same students at different stages of the project. No evidence was provided on whether supervisors achieved this. However Acker et al. (1994) did find that supervisors adapted their preferred style to circumstances. Wright and Lodwick (1989), as with this study, found that some supervisors have their own style of supervision, which they apply to all research students. This does not necessarily mean that supervisors are inflexible regarding specific issues, and that they will not discuss and negotiate with students. But the supervisor's basic style regarding the amount of direction provided and the closeness of the supervision is ingrained. This is a concern. Haksever and Manisali (2000) propose as the solution to student dissatisfaction with aspects of supervision, that supervisors adopt flexible approaches to supervision depending on the needs of individual students. Despite this they acknowledge that the extent of flexibility is usually limited due to difficulties associated with attitudinal and behavioural change. There was general agreement from students and supervisors in this study that supervisors tended to provide more direction when students were experiencing problems.

Supervisors and students negotiated various levels of student autonomy. Generally, students thought that they were functioning more autonomously than their supervisors did. Probable reasons for this include the fact that the students were making the final decisions after discussion with their supervisors and they were the ones actually doing the research. Some supervisors suggested that good supervision led to students feeling independent and autonomous. Most students were happy about their level of autonomy but some felt that they were given too much, they wanted more supervisory advice and guidance. There were no student complaints about lack of independence from their supervisors. The finding that some students would have liked more supervisory guidance is consistent with previous research (see eg, Haksever & Manisali, 2000; Pole et al., 1997; Powles, 1988a, 1988b, 1994). How much assistance to give students, that is striking the appropriate delicate balance, was of concern to both supervisors and students in this study. This finding is similar to previous research (eg, Delamont et al., 1998; Hill et al., 1994; Holdaway et al., 1995; Moses, 1984, 1985; Phillips & Pugh, 1987, 1994; Rudd, 1984, 1985; Winfield, 1987).

Time was a problem for many students and supervisors. Students wanted not only time with their supervisors, but also uninterrupted quality time. Concern about interruptions to meetings was also identified in the Pole et al. (1997) study. Donald et al. (1995) found that supervisor availability was one of the two most important factors in graduate supervision and queried whether supervision was becoming an under-resourced area in the university. Acker et al. (1994) found that student complaints were more often about supervisor accessibility than style. Some supervisors in this study conducted supervision sessions away from their offices to provide quality time for their students. Many students did not get this. There were reports of supervisors being so busy that appointments were unable to be made, appointments broken without notice and long delays in the return of written work. Supervisors were also concerned that their workloads had increased and finding time for supervision was becoming increasingly difficult. One of the associated problems is that the rewards for the demands of supervision are inadequate when compared to personal research and consultancy (O'Brien, 1995).

The current study and previous research (see eg, Moses, 1985; Mullins & Hejka, 1994; Powles, 1988a; Zuber-Skerritt, 1992) has found that effective teaching and supervision requires quality time. Several supervisors in this study suggested that the model of supervision has changed and does need to incorporate teaching. Yeatman (1995) agrees. She believes that with increased PhD student numbers, many from the wrong side of traditional academic tracks, the traditional apprenticeship model is a very "hit-and-miss" method (p. 9). If completion times are to be reduced and completion rates increased this time must be provided as a formal and valued part of an academic's working day. There is evidence that the university is attempting to do this. The most recent Monash Research and Research Training Management Plan (2001) incorporates the new strategy of integrating supervision into the engagement profile process with one of the targets being to ensure that research supervision attracts adequate credit in workload distribution.

7.1.3 The Interrelationship of the Supervisory Relationship, Power, Supervisory Style and Autonomy; and the Effects on the Outcomes of the Supervisory Process

There was evidence from this study that the supervisory relationship, power, supervisory style and autonomy were interrelated, and linked with certain outcomes. Students in supervisory relationships that were categorised³⁵ as professional with good interpersonal working aspects, improving or personal friendships did not report power issues troubling them. Their supervisors' styles were closer and more interactive, meetings were more frequent, and they had no complaints regarding the levels of autonomy they had negotiated with their supervisors. In relation to thesis progress, these students tended to be in the completed thesis group or the ongoing thesis group. Two students who had positive supervisory relationships in the discontinued group had discontinued PhD study for work and family reasons, although one was concerned that his transfer from probationary to full candidature committee meeting had not gone well. One of the main differences between the completed and ongoing thesis groups was that many students in the ongoing group had intermission but none of the completed group did. As for satisfaction with supervision, all of these students except one were all in the satisfied group³⁶. One student became dissatisfied after a committee meeting to transfer him from probationary to full candidature did not go well.

Looking specifically at the three students who had personal friendships with their supervisors, all were in the ongoing thesis group. One student had been troubled by ill health throughout the research process. Despite this she did not formally intermit. The other two intermitted for different reasons. All three were in the satisfied with their supervision group. It appears that good supervisory relationships are linked to shorter completion times, higher completion rates, and greater student satisfaction with the supervisory process. This is consistent with previous research (eg, Aguinis et al., 1996; Friedman, 1987; Goulden, 1991; Jacks et al, 1983; Moses, 1985; Rudd, 1985; West et al., 1988). Wright and Lodwick (1989) found that closer supervision speeds up the research process. Regular supervisory meetings have also been linked to assisting

³⁵ This categorisation of relationships occurred in Chapter 5 in section 5.3.

³⁶ The thesis progress groups were reported in 6.1 and the satisfaction with supervision groups in 6.2.

students to complete within a reasonable time (Holdaway et al., 1995; Moses, 1992b, Powles, 1989). Kam (1997) found that the total time of meetings in an academic year was positively associated with student satisfaction with supervision.

By contrast, students in supervisory relationships that were categorised as fluctuating, deteriorating, or professional with a poor interpersonal relationship, were highly likely to be troubled by power issues. Their supervision tended to be more distant and remote and a significant number felt that they had been given too much autonomy by their supervisors. They wanted more structure to their supervision, and more detailed guidance and feedback. These students tended to be from the discontinued or ongoing thesis groups. Of those in the completed group, one had a better relationship with her new supervisor after she initiated a change and the other was in a relationship that fluctuated towards the end of the supervision. In relation to satisfaction with supervision, all of these students were either in the dissatisfied group or the group that was dissatisfied at various stages of their supervision. None were in the satisfied group. Previous research has indicated that negative personal relations impede a student's progress (eg, Jacks et al., 1983; McAleese & Welsh, 1983; Moses, 1985; Rudd, 1985; Welsh, 1978; West et al., 1988). Previous research has also linked student dissatisfaction with too little supervisory direction and guidance, or remote supervision (eg, Acker et al., 1994; Barrett et al., 1983; Battersby & Battersby, 1980; Haksever & Manisali, 2000; Heiss, 1970; Moses, 1984; Nightingale, 1984; Pole et al., 1997; Powles, 1988a, 1988b, 1989, 1994; Rudd, 1975; Welsh, 1978).

Accordingly, it is suggested that new supervisors, and even some experienced ones, would benefit from education about the importance of a positive supervisory relationship, and how to foster such a relationship with PhD students. The importance of a close and interactive supervisory style, whilst respecting student autonomy, would be stressed. Being given too much independence has obstructed some of the students in this study. There is also a need for student education. PhD students must take responsibility also; there are several examples in this study where outcomes may have been worse if the student had not assumed some responsibility. One student initiated a change of supervisor when she was struggling and became dissatisfied with her supervision. After the change she made rapid progress. Another student, very satisfied with his supervisor, coped well when his supervisor left the university unexpectedly. He

took some responsibility, along with his supervisor and department, in organising a smooth and effective transfer. Both these students were in the completed thesis group. By contrast, the outcome for the student who was dissatisfied about her supervision, but did nothing about it until her supervisor convened a committee meeting (because she was dissatisfied with her student's progress), was an extremely upset student and supervisor. At the end of the data collection period for this study, the student was on intermission because of ill health and poor progress. The outcome was not looking good. Kam (1997) found that "how well a supervision process is rated depends on how much responsibility a student assumes" (p. 101).

After careful examination of the reasons for students discontinuing PhD study (other than personal reasons) and student dissatisfaction with supervision, to attribute discontinuing and/or dissatisfaction to poor supervision would be somewhat misleading. Rather discontinuing and/or dissatisfaction related to:

- Supervisors' and students' expectations of the supervisory relationship and process being contradictory or incompatible;
- Choosing a supervisor for the wrong reasons, that is, solely for personal or interpersonal reasons;
- Inadequate student educational preparation for PhD candidature;
- Inexperienced supervisors;
- A poor match between the student's research topic and the supervisor's area of expertise; and
- The workloads of supervisors.

Some of these can be remedied. Kam (1997) found that "mutual understanding of role expectations is crucial to the success of the supervisory process" (p. 81). Aspland et al. (1999) found that students and supervisors "expressed a preference for sharing understanding about supervision and reaching agreement over fundamental expectations and responsibilities with one another early in the candidature" (p.131). One of the strategies they developed to facilitate this was the use of a version of Moses' RPRS (that was adapted by Ryan and Whittle, 1995) by students and supervisors at six monthly intervals to assist them "to share, discuss, and reach agreement about fundamental expectations and responsibilities" (p. 132). Moses (1981a) RPRS has proven to be effective in this study in identifying that supervisors and students who

discontinued and/or became dissatisfied had different expectations of the supervisory relationship and process. Students and supervisors from these groups tended to have low numbers of identical and similar responses and, in particular, high numbers of opposite responses to items on the RPRS when compared with completed and satisfied groups. If prospective students and supervisors independently completed the RPRS and had high numbers of opposite responses, discussions could occur as to how important these different expectations were to each party, and whether it was wise to formalise the supervision. Students could be guided on choosing a supervisor solely for personal or interpersonal reasons, and an effective academic match could be encouraged. Manderson (1996) cautioned students to attend to their intellectual rather than their personal need when choosing a supervisor. Inexperienced supervisors could be provided with more support, perhaps from a mentor system. In addition they could be given students that have been well prepared educationally for PhD candidature. Many of the inexperienced supervisors in this study were given students who had atypical educational preparations or probationary candidature.

Having two active supervisors was also linked positively with both thesis completion and satisfaction with supervision. The four students described earlier in this chapter as having two active supervisors (either formally or informally) were all in the satisfied group. In addition to this, three were in the completed thesis group and the fourth was in the ongoing thesis group. It appears that having two active supervisors is beneficial for student satisfaction and thesis completion. Others have advocated having two active supervisors (eg, Bournier & Hughes, 1991; Holloway, 1995; Pearson, 1996).

7.1.4 Characteristic Features of Particular Student and/or Supervisor Groups

A number of student and supervisor groups had certain common features and issues. These groups included part-time, international and older students. Also students who experienced a temporary change of supervision or had personal problems or ill health deserve consideration. Supervisor groups include inexperienced supervisors and supervisors concerned about their student's lack of progress. Issues of different disciplines and gender effected both students and supervisors. The profiles of "successful" and "unsuccessful" students and the profiles of "satisfied" and "dissatisfied" students will also be presented.

7.1.4.1 Part-time Students

Some supervisors in this study were concerned about keeping part-time students on track. This study found that both part-time and full-time students had difficulty finding enough time for their studies. Whilst the part-time students mostly had busy full-time jobs, the full-time students were mostly working part-time in addition to full-time study. Many students from both groups had family and professional responsibilities as well. In terms of outcomes, the part-time students did well. There were no significant differences between the full and part-time students for the completed thesis group and slightly more full-time students were in the ongoing group. Part-time students appeared more satisfied with their supervision. There were greater numbers of part-time students in the satisfied group and greater numbers of full-time students in the dissatisfied at various stages and dissatisfied groups. One possible reason for this is that the pace of a part-time student is generally slower, and perhaps this fitted in better with supervisors' increasing workloads. Certainly supervisory meetings were less frequent for part-time students in this study.

7.1.4.2 International Students

There were three international students in this study. Two developed improving relationships with their supervisors; this improving relationship was of the utmost importance to one of these students and it gave the other a certain amount of pride. They were both in the completed thesis and satisfied with supervision groups. Previous research has indicated that international students completed their degrees more quickly than domestic students did (Lipschutz, 1993). However, the outlook for the third international student was not good. She described her relationship with her supervisor as poor and was dissatisfied with the amount of assistance he gave her. Her supervisor's opinion differed; he felt he was providing her with a lot of assistance. This student felt that she had not been given any choices. Without consultation, her original supervisor, a woman, had been changed to her current supervisor who was a man. Multiple problems, for example, gender, culture, personality, educational preparation, language difficulties and differing expectations about the supervisory process seemed to contribute to the situation. This student was in the discontinued thesis and dissatisfied with supervision groups. It is not exactly clear why these international students had such different experiences and outcomes, but certainly the positive supervisory relationships helped

the previous two students. One of these two students had language and academic difficulties, which, with the help and support of his supervisor, he overcame.

7.1.4.3 Older Students

Older students did not rate well in Welsh's (1980) portrait of the "successful student" (cited in Moses, 1981a). But the finding from this study is different. The "completed thesis" group tended to be older. It is possible that the profile of the successful student has changed in recent years along with the profile of students generally³⁷. Also the "satisfied" with their supervision group tended to be slightly older; the "dissatisfied" group was younger.

7.1.4.4 Students who experienced a Temporary Change of Supervisor

Ten students in this study experienced a temporary change of supervision during the data collection period for this study. This resulted in problems and delays to thesis work for eight of these students. When and how students were told about their supervisor going on leave affected some students. Being told casually at the last minute was not well received. The two students who did not experience problems and delays to thesis work had someone to take over their supervision whom they knew, and who was already familiar with their project. In addition their supervisors gave them the option of e-mail or phone contact while they were on leave. Even a student with co-supervisors, who normally had different roles, experienced problems when one was away. Many of these students experiencing problems and difficulties had good relationships with their supervisors and were generally satisfied students.

7.1.4.5 Students who had Personal Problems or Ill Health

Many students experienced personal problems or ill health. In addition, both academic and personal isolation affected a significant number of students and interfered with their progress. These students found supervisor concern and support during these periods to be crucial. Only one student in this study did not feel she received such support. Hockey (1995) also found that many supervisors took the pastoral care side of their responsibilities seriously and devoted considerable time and energy to it. The importance to students of supervisor concern and support regarding their general welfare has already been established (Kam, 1997; Moses, 1981a, 1988; Welsh, 1978;

³⁷ This change of student profile was reported in 4.2.4.

Wilson, 1980) along with the fact that some supervisors do not see this as part of their role (Wilson, 1980). Many students ended up having a formal period of intermission. Student intermission was one of the main differences between the completed and ongoing thesis groups. West et al. (1988) identified some experience that required the student to intermit as one reason for slow completion rates.

7.1.4.6 Inexperienced Supervisors

Whilst there were several inexperienced supervisors, for one supervisor it was his first PhD supervision. Co-supervisory arrangements were put in place to assist him, but as the co-supervisor went on leave, there was no effective support for this supervisor or his student. This student was dissatisfied with his supervision and withdrew from candidature after approximately a year's full-time study. In general, the dissatisfied students were more likely to have inexperienced supervisors. Supervision requires interpersonal skills plus some knowledge about the supervisory process and supervisory styles. Inexperienced supervisors require education and support while they gain experience.

7.1.4.7 Supervisors Concerned about their Student's Progress

Several supervisors were worried about their student's progress for varying reasons. Often their students had an atypical educational preparation for PhD candidature. Supervisors tried a number of strategies to try and help these students. But if these strategies failed, tensions rose in the supervisory relationships, with varying degrees of breakdown. Some of these supervisors were quite concerned about this. They were able to turn informally to colleagues, but there was no formal organised support for supervisors with students who were struggling.

7.1.4.8 Different Disciplines

Disciplinary differences were not very apparent in this study. Students from the Arts Faculty and the other faculties tended to want the same things: positive supervisory relationships, supervisory guidance and concern, and discussion and negotiation about any problems or issues that concerned them. The problems and issues were different for students from different disciplines and faculties, but what the students wanted was supervisory interest and help.

Whilst there were not clear disciplinary differences regarding the amount of supervisory direction provided generally, some supervisors from the other faculties provided more

direction early to establish the projects, whereas some Arts Faculty supervisors gave less direction early so as to provide students with creative space. Generally supervision in the other faculties tended to be closer than in the Arts Faculty. Other faculty students tended to have more frequent supervisory meetings than Arts Faculty students. Moses (1981a) found that there was more supervisory direction and involvement in science than social science and arts. However several authors (eg, Cullen et al., 1994; Holdaway et al., 1995; Moses, 1985) argued that there are individual differences within a discipline that are greater than those across disciplines.

Approximately half the students in the study (mostly from the Arts Faculty) complained of experiencing academic isolation; four of these students experienced personal isolation as well. The academic and personal isolation was so severe for one student that she “fluctuated between hope and depression”. Six students (two from the Faculty of Arts and four from the other faculties) said that networks with other PhD students, academics and industry, or being a part of a research team curtailed feelings of isolation. Wright (1986) suggested students in the arts/humanities and social sciences who are working alone, that is, in both physical and intellectual isolation, were more likely to experience problems. Wright and Lodwick (1989) argued for closer involvement of supervisors and other academic staff in non-science disciplines.

7.1.4.9 Gender

Although 11 out of 21 students were female, only four of the 18 supervisors were female. All 10 male students had male supervisors, whereas only five female students had female supervisors; the remaining six had male supervisors. Despite this there were no apparent gender issues or different outcomes. Gender may have been one of many contributing issues for one female student who had a male supervisor and was experiencing both relationship and thesis progress problems.

There were however several examples of women helping and supporting women. Heinrich (1995) described these relationships as “power with” relationships or professional friendships. There were not any clear differences in thesis progress outcomes for these dyads; all were in the ongoing thesis group. However there were differences in satisfaction with supervision outcomes, they were mostly in the satisfied

group. There were also examples of “power over” relationships between women with negative effects on thesis outcomes and student satisfaction with supervision.

Seagram et al. (1998) found that there were no significant gender differences in time to complete (TTC). Similarly to Seagram et al. (1998) there were no apparent gender differences in the small group of completing students in this study. Most of the completing female students had male supervisors. This is unlikely to be significant, as most of the supervisors in this study were male. This is in contrast to Lipschutz (1993) who found women generally were more likely to take longer to complete their degrees. Lipschutz (1993) also found that the pace of women’s work was faster in departments where women were present in significant numbers. This is similar to the findings of others (Neumark & Gardecki, 1998; Tidball, 1986). A study by Epp (1994) found that female graduate students recommended that universities employ more female professors to provide more role models. Smeby (2000) also found that gender does matter. There was a significant same-gender tendency in supervisory relationships, which was stronger among women than men.

7.1.4.10 Profile of the “Successful” Student

One of the supervisors in this study said:

There’s really no way of ever knowing whether someone’s going to succeed or not.

Despite this, the successful students exhibited certain characteristics. They tended to be older and international students or academic staff members. It was unlikely that the student intermitted during candidature. These students possibly had two active supervisors. In addition their supervisors tended to be from the higher levels of academic appointment and they were mostly experienced PhD supervisors. There tended to be a close match between the student’s PhD topic and the supervisor’s area of expertise.

7.1.4.11 Profile of the “Unsuccessful” Student

The unsuccessful students were likely to have been given probationary candidature. They only had one active supervisor who was from the lower levels of academic appointment and with moderate PhD supervision experience. There was a moderate match between the student’s topic and the supervisor’s expertise. Given that departmental processes identified these students and gave them probationary

candidature, it is puzzling that they were not assigned supervisors who were senior academics and experienced supervisors.

7.1.4.12 Profile of the “Satisfied” Student

The satisfied student tended to be part-time, slightly older and an international student or academic staff member. Their educational preparation for PhD study was likely to have been typical. They possibly had two active supervisors. Their supervisors were from the higher levels of academic appointment and they had varied PhD supervisory experience. There was a close match regarding the student’s topic and the supervisor’s expertise.

7.1.4.13 Profile of the “Dissatisfied” Student

Dissatisfied students were likely to be full-time, young and straight from undergraduate study. Their educational backgrounds varied. The two students who had typical preparations had second class honours degrees. A greater percentage of these students were given probationary candidature. Their supervisors were from lower levels of academic appointment and inexperienced PhD supervisors. It appears likely that more senior academic staff and experienced supervisors have skills that make supervision a more satisfying experience for students. The students who were initially satisfied with their supervision, but became dissatisfied at various stages, had supervisors from the highest levels of appointment and also the most experienced. It is probable that this is what kept this group from drifting into the dissatisfied student group. These students were more likely to be full-time, female, from the Arts Faculty, and like the dissatisfied group, they had varied educational backgrounds. Seagram et al. (1998) and Haksever and Manisali (2000) found that male graduates were more satisfied with the quality of supervision they received than were females. This is consistent with the findings of this study.

7.2 Limitations

There were a number of limitations associated with this study. First, a small non-probability quota sample was used, essentially a sample of volunteers. As stated in Chapter 3, Methodology, this means that the sample may or may not accurately represent the population (Brink & Wood, 1994) and that the extent to which results can be generalised is questionable (Holloway, 1995; Polit & Hungler, 1999). The researcher presented arguments in Chapter 4, Antecedent Conditions that the PhD student sample,

although small, was reasonably representative of PhD students as they currently exist. Whether the PhD supervisor sample was representative of PhD supervisors generally is difficult to know. Although predominantly male, it included representatives from a variety of academic appointments and supervisory experiences.

Secondly, because of time restrictions PhD students and supervisors were not studied from the commencement of candidature to either completion or withdrawal from candidature. The time restrictions derived from the fact that the researcher herself was a PhD student. In fact the extended data collection period was only possible because of the longer candidature period afforded the researcher because of her part-time PhD status. So the findings are limited to the data collection period, which was from November 1995 to October 1998. All the students in the study did not commence PhD candidature at the same time, and some are full-time and some are part-time. Although some allowances were made for this regarding the timing of the commencement of data collection for full and part-time students, their situations varied greatly and comparisons need to be viewed with some caution.

Thirdly, data were collected predominantly by self-reports on what is essentially a very sensitive topic. As pointed out in Chapter 4 Methodology, respondents have not always carried out the actions they say they have when interviewed (Hockey, 1996b; Delamont et al., 1998), and some caution is needed when interpreting interview data.

7.3 Conclusions

After careful consideration of the findings of this study, a number of conclusions have been drawn. These conclusions are presented under the same headings as the Summary.

7.3.1 Supervisory Arrangements and Relationships

The relationships that developed and were maintained between PhD students and supervisors varied and were dependent on multiple factors. These factors included the personality, level of appointment, PhD supervisory experience and supervisory style of supervisors. The time available for supervision was also important. Student ability, educational preparation, personality and progress all affected the relationships that developed.

- Supervisors were allocated to students via a variety of informal processes. It was important for students and supervisors to feel that they had choices in these informal processes, or at least the ability to say “no” to a particular supervisor or supervision. Issues important to students were the interpersonal working relationship with their supervisors, and an academic and methodological match. Choosing a supervisor for interpersonal or personal reasons alone was not wise. Issues important to supervisors were expertise in the area of the student’s research, the student’s educational preparation, and personality clashes.
- Most students had only one active supervisor. Some of these students made good progress with their theses and were satisfied with their supervision. A few students had two active supervisors, either as part of their formal supervisory arrangements or informally. These students made good progress with their theses and were invariably satisfied with their supervision.
- Students and supervisors developed a variety of relationships. Positive relationships with good interpersonal working aspects were moderately associated with thesis completion and strongly associated with satisfaction with supervision. A number of these positive relationships were successful personal friendships. The converse was also found. Negative or poor supervisory relationships either slowed the research process with time, energy and emotion wasted on disputes, or were often a factor in students deciding to discontinue their PhD study. They were also strongly associated with students’ dissatisfaction with supervision.
- Power issues were often of concern to students in poor supervisory relationships, but not for those in the positive relationships. Student and supervisor factors contributed to this. These factors included collegial and more personal relationships, the personalities of the students and supervisors, the age and professional standing of some students and that supervision was an issue of expertise rather than power. Also supervisors took particular action to minimise power relations. These actions included giving suggestions rather than commands, being supportive but not demanding, and having meetings in congenial spots, eg, over cups of coffee.

7.3.2 Supervisory Style and Student Autonomy

Supervisors based their supervisory styles primarily on their assessment of individual students’ abilities, specific needs, personalities and motivation. Also the stage of the thesis was an influencing factor. Other factors determining supervisory style were the

way they themselves were supervised, their philosophies and beliefs about supervision and teaching, their previous experiences supervising students, and the current context where there are financial incentives for decreasing completion times and increasing completion rates. Specific conclusions follow.

- A variety of supervisory styles and levels of student autonomy were apparent in this study. Close, “interactive” supervision with frequent meetings and students making the final decisions was associated positively with thesis completion and student satisfaction with supervision. An interactive supervisory style includes guidance, advice, suggestions, discussion, negotiation and support. This interactive supervisory style was important to students, and strongly associated with good working supervisory relationships. The converse was also found. Supervision that was not close or interactive was associated with slow thesis progress, students discontinuing PhD study and dissatisfaction with supervision. These students wanted less autonomy, more structure to their supervision and more supervisory guidance and feedback. Students being given too little autonomy was not an issue.
- A supervisor’s basic style regarding the amount of direction provided and the closeness of the supervision is ingrained and resistant to change. This does not necessarily mean that supervisors are inflexible regarding specific issues, and that they will not discuss and negotiate with students.
- An adequate amount of quality time for supervision is essential. Increasing workloads for supervisors in association with financial incentives to decrease completion times and increase completion rates have created difficulties here.

7.3.3 The Interrelationship of the Supervisory Relationship, Power, Supervisory Style and Autonomy; and the Effects on the Outcomes of the Supervisory Process

The supervisory relationship, power, supervisory style and autonomy are interrelated and moderately associated with thesis completion and strongly associated with satisfaction with supervision. However, fundamental to these relationships were the students’ and supervisors’ expectations of the supervisory relationship and process. Specific conclusions follow.

- Generally students in positive supervisory relationships did not experience concerns about power issues, had close and interactive supervision and were satisfied with the levels of autonomy they had negotiated with their supervisors. These students made

good progress with their thesis work and tended to be satisfied with their supervision. Intermission slowed the progress of some of these students. Students in negative or poor supervisory relationships often complained of power issues, had remote supervision, and felt that they were given too much autonomy. Their progress was slower or they discontinued study. Invariably they were dissatisfied with their supervision. A contributing factor in most of these relationships was that the supervisor was not satisfied with the student's progress. No formal mechanisms were in place to support these students and supervisors.

- Supervisors and students are both responsible for the quality of the supervisory relationship and process.
- Supervisors and students expectations of the supervisory relationship and process are important and effect the quality of the supervisory process and the outcomes of the process. These expectations can to some extent be determined using Moses' (1981a) RPRS. Supervisors and students in the "completed", "ongoing", "satisfied" and "dissatisfied at various stages" of the supervisory process groups all had reasonably high numbers of identical and similar responses with low numbers of opposite responses. Supervisors and students in the "discontinued" and "dissatisfied" groups tended to have lower numbers of identical and similar responses, and crucially, higher numbers of opposite responses or an opposite response in an area that was of critical importance to either the supervisor or student. The RPRS could be used to identify "at risk" supervision prior to the commencement of the supervision.

7.3.4 Characteristic Features of Particular Student and/or Supervisor Groups

Student and supervisor issues both contributed to slower thesis progress. Students' ill health or personal problems contributed to slower progress, particularly when this resulted in a period of intermission. Supervisors' leave which necessitated a temporary change of supervision mostly caused problems and delays in thesis work, which delayed progress. Specific conclusions follow.

- Students with atypical educational preparations or second class honours degrees who were assigned inexperienced supervisors from the lower levels of academic appointment were "at risk" in relation to non-completion and dissatisfaction with their supervision. These students need to be assigned experienced supervisors and

senior academics to supervise them. Their supervisors were “at risk” in relation to their confidence and dissatisfaction with supervision. Inexperienced supervisors require education and support while they gain PhD supervision experience.

- A temporary change of supervision is likely to delay thesis progress and cause problems for students. The risks are reduced when someone takes over their supervision who they know and who is already familiar with their project. In addition it helps if supervisors give students the option of e-mail or phone contact while they are on leave.
- It is crucial for students that supervisors provide concern and support for them when they are experiencing ill health, personal problems, and academic or personal isolation.
- Numbers in this study were too small to form firm conclusions regarding part-time, international or older students. Neither could firm conclusions be drawn about disciplinary differences or gender issues.

7.4 Recommendations

A number of recommendations arise from the findings and conclusions of this study. Some recommendations relate to supervisory practice and others are for further research.

7.4.1 Recommendations for Supervisory Practice

There needs to be some slightly more formalised processes regarding the assigning of supervisors to PhD students, deciding on single supervisory arrangements or two active supervisors, and monitoring satisfaction with the supervisory relationship and process.

1. In the process of assigning supervisors to PhD students both supervisors and students need to feel that they have choices or at least the ability to say “no” to a particular supervision. Students need to be encouraged to base their choices on the likelihood of a positive constructive interpersonal working relationship plus the supervisor’s expertise in relation to the their proposed topic and methodology. Students need to be cautioned regarding choosing a supervisor for interpersonal or personal reasons alone. Supervisors’ concerns regarding the student’s educational preparation or topic, in relation to their own expertise, need to be addressed along with any concerns about personality clashes. When a student’s educational

- preparation is atypical for PhD candidature or the student is weaker academically, eg, has a second class honours degree, it is important to assign an experienced supervisor who is also a senior academic.
2. Supervisors' and students' expectations of the supervisory relationship and process strongly influence the relationships that they develop and whether the supervisor's supervisory style will match the student's expectations. Prospective students and supervisors should separately complete Moses (1981a) RPRS. If they have a high number of opposite responses, or alternatively an opposite response to an item that is of critical importance to either party, serious consideration should be given regarding whether they will be able to work together constructively over a number of years. An opposite response is when the student and supervisor respond on opposite sides of the undecided response option. It is anticipated that this will increase the likelihood of the student and supervisor developing a positive supervisory relationship, and that each party's expectations regarding supervisory style will be achieved. It is also anticipated that this will decrease the likelihood of personality clashes, which are often over different expectations about the supervisory relationship and process.
 3. Single supervisory arrangements or two active supervisors? If one supervisor can meet the student's needs in relation to a positive constructive interpersonal working relationship, plus topic and methodological expertise, then one active supervisor is appropriate. However, if this is not possible, the student needs to be assigned two active supervisors as part of their formal supervisory arrangements, either via co-supervisory or associate supervisor arrangements. It is imperative that all three meet together at least every two months and that both supervisors receive written work. It is also advisable that the main supervisor satisfies the positive constructive interpersonal working relationship requirement. It is also imperative that there are two active supervisors when one supervisor is inexperienced, particularly for a first PhD supervision experience. The second supervisor must be an experienced PhD supervisor, a senior academic and available to both student and supervisor. This will provide support for the new supervisor while gaining valuable experience. It will also provide support for the student. It is advisable that the student has a strong educational background for a supervisor's first PhD supervision.
 4. Each department needs to provide some semi-formal mechanism for the ongoing monitoring of satisfaction with the supervisory arrangements once those

arrangements are in place. This necessitates face-to face interactions between a responsible departmental person and each student and supervisor separately, at approximately six monthly intervals. If the student is dissatisfied with their supervisory arrangements to the point where it is interfering with thesis progress, a quick and effective change of supervisory arrangements needs to be made. If the supervisor is experiencing difficulties or worried about their student's progress, support mechanisms need to be put in place quickly.

There needs to be education for supervisors and students, either separately or together, that incorporates the following skills and findings from this study.

- The importance of a positive supervisory relationship in relation to thesis outcomes and satisfaction with supervision;
- Interpersonal relationship skills;
- The importance of collegial rather than power relationships, and ways supervisors can minimise power relations;
- Conflict resolution skills;
- The importance of close, interactive supervision with frequent meetings in relation to thesis outcomes and satisfaction with supervision;
- Students understanding that their own behaviours contribute to positive and negative supervisory relationships and outcomes;
- Supervision requires quality time free from interruptions; and
- The importance to students of supervisory concern and support when they are experiencing ill health, personal problems, or academic or personal isolation.

An adequate amount of quality time needs to be allocated to PhD supervision if completion times are to be reduced, completion rates increased, and supervisors and students are to be satisfied with the supervision experience. Closer and more interactive supervision, which includes some teaching, and frequent meetings, are linked positively with thesis completion and satisfaction with supervision. Therefore sufficient quality time must be provided. There is evidence that the university is attempting to do this. The most recent Monash Research and Research Training Management Plan (2001) incorporates the new strategy of integrating supervision into the engagement profile process with one of the targets being to ensure that research supervision attracts

adequate credit in workload distribution. However, it is important that this is put into practice, and it is then up to supervisors to make sure the time they provide is quality time free from interruptions.

Supervisory arrangements for students when their supervisors go on leave need to be formalised. Students need to be told about the leave early, and plans put in place to effect a smooth transition from one supervisor to another.

1. When a student has two active supervisors, one or two planning meetings involving the student and both supervisors should suffice to work out the current situation and what needs to occur during one supervisor's leave. This planning needs to incorporate what the student will do and what the remaining supervisor will do.
2. When a student has only one active supervisor, two or three planning meetings involving the student, the supervisor who is going on leave and the substitute are needed. This will give the student and the temporary supervisor the opportunity to get to know each other and what is expected from each of them and the temporary supervisor will become familiar with the student's research.

In both of the above instances, an offer by the supervisor going on leave for e-mail or phone contact provides additional support.

7.4.2 Recommendations for Research

In this study several students and supervisors maintained personal friendships throughout the data collection period (November 1995 to October 1998). In addition various degrees of personal friendship developed for other dyads. This is a controversial area in the research degree supervision literature. Further research regarding the wisdom of personal friendships in supervisory relationships is needed to clarify the benefits and risks.

Another controversial area in the research degree supervision literature is whether supervisors change their supervisory style for different students and individual students as needed at different stages of the research process. Further research concentrating specifically on this phenomenon is needed.

Further similar research to this study with a larger sample and more dyads from the other faculties, particularly science, would be useful especially if it were done after the

recommendations from this study were implemented. This would test the recommendations.

7.5 Final Thoughts

The PhD supervisory relationship is a delicate, often personal relationship over a protracted period of time. It is of crucial importance to students. When successful, it results in more than a timely thesis and PhD award, it can provide a stepping stone to a career and may leave both student and supervisor with feelings of achievement, satisfaction and warmth, and often life-long friendships. In this study some participants likened the supervisory relationship to a marriage, others to parenting. Is “supervisor” the right word for such a relationship? At a seminar sometime ago when the researcher was presenting interim findings from this study, several seminar participants queried this. They suggested that supervisor was not the right word for the relationship the researcher was describing.

Others have also suggested this. According to Shannon (1995) “The synonyms for ‘supervisor’ in Roget’s Thesaurus range from ‘director’ to ‘agitator’ and ‘demagogue’”. A moment’s reflection on our supervisory activities and those of our colleagues may make us feel that this is as close to an inadequate definition as we can get” (p. 12). Holdaway (1996) said that the term “supervisor” implies a considerable degree of direction for the research degree student, and for this reason some faculty members prefer the term “adviser”. These faculty members think the term “adviser” implies less direction and involvement in approval of research activities and thesis drafts. The problem here is that students invariably wanted more rather than less supervisor involvement. Leder (1995) discussed the use of the word “mentor” saying that “the relationship between supervisor and candidate formed over the extended period of the supervision process contains many of the elements also described as part of the mentoring process” (p. 6). But do all student want their supervisors to be mentors? And do we need a change in terminology to instigate a change in thinking about the way we conduct supervisory relationships?

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Appendices

Appendix 1 - Explanatory Statement, PhD Supervisor

Monday, 30 October, 1995

EXPLANATORY STATEMENT

Dear PhD Supervisor,

This letter has been forwarded to you by the Research Training and Support Branch with the approval of the PhD and Scholarships Committee. I do not know who you are unless you voluntarily respond to this letter.

I am writing to introduce myself and request your participation in the following research which I am undertaking for a PhD degree. My name is Glenice Ives, and I am both a staff member and a student at Monash University. As a staff member, I am a senior lecturer in the Caroline Chisholm School of Nursing. As a student, I am enrolled in a PhD degree in the School of Graduate Studies, Faculty of Education. My current supervisor is Professor Dick Gunstone (whilst Associate Professor Glenn Rowley is on leave) and my associate supervisor is Professor Terry Hore.

My research aims to explore the ways PhD students and supervisors work together. There will be a particular emphasis on the personal and interpersonal aspects of the relationship, and how autonomy and power are negotiated and managed over time within the relationship. Many believe that the relationship that supervisors develop with their students can do much to increase student satisfaction with the PhD process, produce quality theses and prevent demoralisation, emotional disturbances, slow progress and the large number of "drop outs". An indepth picture of the patterns that are evident in the ways students and supervisors work together, and how autonomy and power are negotiated and managed over

time during the PhD supervisory process would increase our current understanding of PhD supervision and provide both supervisors and PhD students with information that could make the relationship more productive and rewarding. The title of my project is "The nature of the PhD supervisory relationship: issues of supervisory style, autonomy and power".

Participation in this research is voluntary. I will also be inviting one or more of your PhD student(s) to participate, as I am interested in exploring both students and supervisors perspectives in matched pair situations. Participation would involve completing the Role Perception Rating Scale developed by Ingrid Moses (enclosed) and undertaking a series of semi-structured interviews over the next three to four years. Interviews for full-time students will occur at approximately 12 months into candidature and approximately each 12 months thereafter. Interviews for part-time students will occur 18-24 months into candidature and each 18-24 months thereafter. Interviews for supervisors will occur separately at these same intervals. It is anticipated that each interview will take approximately one hour. Dates, times and the venue would be negotiated to suit you. If you agree, the interviews will be tape recorded.

Confidentiality regarding all information is assured. Data will be stored in a locked filing cabinet at my home. No information that could lead to the identification of individual participants will be released. A summary of the research results will be made available if you wish it.

If you are willing to participate in this study, please complete the Role Perception Rating Scale and the Consent Form and return them in the reply paid envelope provided by Wednesday, 22 November, 1995. As matched PhD student-supervisor pairs are needed for this study, if your PhD student(s) do not have the time, or are unwilling to participate, you will not be needed for any further part in the study and I will advise you if this occurs. As previously stated, participation in this research is voluntary. You may also withdraw from participation at any time.

Should you have any complaint concerning the manner in which this research is conducted, please do not hesitate to contact The Standing Committee on Ethics in Research on Humans at the following address:

The Secretary

The Standing Committee on Ethics in Research on Humans

Monash University, Wellington Road, Clayton, Victoria, 3168

Telephone: 03 9905 2052 Fax: 03 9905 5342

Please do not hesitate to contact me if you have any concerns or queries about the research.
I look forward to hearing from you.

Yours faithfully,

Glenice Ives

Telephone: 9904 4202 (business hours)

Appendix 2 - Explanatory Statement, PhD Student

Monday, 30 October, 1995

EXPLANATORY STATEMENT

Dear PhD Student,

This letter has been forwarded to you by the Research Training and Support Branch with the approval of the PhD and Scholarships Committee. I do not know who you are unless you voluntarily respond to this letter.

I am writing to introduce myself and request your participation in the following research which I am undertaking for a PhD degree. My name is Glenice Ives, and I am both a staff member and a student at Monash University. As a staff member, I am a senior lecturer in the Caroline Chisholm School of Nursing. As a student, I am enrolled in a PhD degree in the School of Graduate Studies, Faculty of Education. My current supervisor is Professor Dick Gunstone (whilst Associate Professor Glenn Rowley is on leave) and my associate supervisor is Professor Terry Hore.

My research aims to explore the ways PhD students and supervisors work together. There will be a particular emphasis on the personal and interpersonal aspects of the relationship, and how autonomy and power are negotiated and managed over time within the relationship. Many believe that the relationship that supervisors develop with their students can do much to increase student satisfaction with the PhD process, produce quality theses and prevent demoralisation, emotional disturbances, slow progress and the large number of "drop outs". An indepth picture of the patterns that are evident in the ways students and supervisors work together, and how autonomy and power are negotiated and managed over

time during the PhD supervisory process would increase our current understanding of PhD supervision and provide both supervisors and PhD students with information that could make the relationship more productive and rewarding. The title of my project is "The nature of the PhD supervisory relationship: issues of supervisory style, autonomy and power".

Participation in this research is voluntary. I will also be inviting your main official supervisor to participate, as I am interested in exploring both students and supervisors perspectives in matched pair situations. Participation would involve completing the Role Perception Rating Scale developed by Ingrid Moses (enclosed) and undertaking a series of semi-structured interviews over the next three to four years. Interviews for full-time students will occur at approximately 12 months into candidature and approximately each 12 months thereafter. Interviews for part-time students will occur 18-24 months into candidature and each 18-24 months thereafter. Interviews for supervisors will occur separately at these same intervals. It is anticipated that each interview will take approximately one hour. Dates, times and the venue would be negotiated to suit you. If you agree, the interviews will be tape recorded.

Confidentiality regarding all information is assured. Data will be stored in a locked filing cabinet at my home. No information that could lead to the identification of individual participants will be released. A summary of the research results will be made available if you wish it.

If you are willing to participate in this study, please complete the Role Perception Rating Scale and the Consent Form and return them in the reply paid envelope provided by Wednesday, 22 November, 1995. As matched PhD student-supervisor pairs are needed for this study, if your supervisor does not have the time, or is unwilling to participate, you will not be needed for any further part in the study and I will advise you if this occurs. As previously stated, participation in this research is voluntary. You may also withdraw from participation at any time.

Should you have any complaint concerning the manner in which this research is conducted, please do not hesitate to contact The Standing Committee on Ethics in Research on Humans at the following address:

The Secretary

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Telephone: 03 9905 2052 Fax: 03 9905 5342

Please do not hesitate to contact me if you have any concerns or queries about the research.
I look forward to hearing from you.

Yours faithfully,

Glenice Ives

Telephone: 9904 4202 (business hours)

Appendix 3 - Consent Form, PhD Student

I have read and understood the information provided on the Explanatory Statement for the research project entitled: "The nature of the PhD supervisory relationship: issues of supervisory style, autonomy and power".

I am willing to be a participant in the study.

Name: _____ Signature: _____ Date: _____

Faculty: _____

Department: _____

Phone Number: _____ (business hours) _____ (after hours)

I would be willing for the interviews to be tape recorded Yes / No

The name of my main official supervisor is: _____

**Please return this consent form along with the completed Role Perception
Rating Scale in the reply paid envelope by Wednesday, 22 November 1955**

Appendix 4 - Consent Form, PhD Supervisor

I have read and understood the information provided on the Explanatory Statement for the research project entitled: "The nature of the PhD supervisory relationship: issues of supervisory style, autonomy and power".

I am willing to be a participant in the study.

Name: _____ Signature: _____ Date: _____

Faculty: _____

Department: _____

Phone Number: _____ (business hours) _____ (after hours)

I would be willing for the interviews to be tape recorded Yes / No

Please return this consent form along with the completed Role Perception Rating Scale in the reply paid envelope by Wednesday, 22 November, 1995.

Appendix 5 - Role Perception Rating Scale (RPRS)

Read each pair of statements listed on this sheet. You may not agree fully with either of the statements. Therefore, please estimate your position and mark it on the scale. For example, if you believe very strongly that supervisors should select the research topic you'd circle (1) on scale 1.

Topic/course of study		
1. It is the supervisor's responsibility to select a promising topic	1 2 3 4 5	It is the student's responsibility to select a promising topic
2. In the end, it is up to the supervisor to decide which theoretical frame of reference is most appropriate	1 2 3 4 5	Students have a right to choose their own theoretical standpoint even if it conflicts with the supervisor's
3. The supervisor should direct the student in the development of an appropriate programme of research and study	1 2 3 4 5	The supervisor should act mainly as a sounding board for the student's ideas and give advice
Contact/Involvement		
4. Staff-student relationships are purely professional and personal matters should not intrude	1 2 3 4 5	Staff-student relationships are purely professional and personal matters should not intrude
5. The supervisor should initiate frequent meetings with the student	1 2 3 4 5	It is up to the student to decide when s/he wants meetings with the supervisor
6. The supervisor should know at all times at which problems the student is working	1 2 3 4 5	Students should have the opportunity to find their own way without having to account for how they spend their time
7. The supervisor should terminate supervision if s/he thinks the project is beyond the student	1 2 3 4 5	The supervisor should support the student right through until the thesis has been submitted, regardless of his/her opinion of the work
The Thesis		
8. The supervisor should ensure that the thesis is finished not much later than the minimum period	1 2 3 4 5	As long as the student works steadily s/he can take as long as s/he needs to finish the work
9. The supervisor has direct responsibility for the standard of the thesis	1 2 3 4 5	The supervisor advises only and leaves all decisions concerning content, format and standards to the student
10. The supervisor should insist on seeing drafts of every section of the thesis in order to review them	1 2 3 4 5	It is up to the student to ask for constructive criticism from the supervisor
11. The supervisor should assist in the actual writing of the thesis if the student has difficulties	1 2 3 4 5	The supervisor should be very wary of contributing too much to the thesis

This Role Perception Rating Scale was developed by Ingrid Moses of The Centre for Learning and Teaching, University of Technology, Sydney.

Appendix 6 - Interview Guide, PhD Student

Background Profile

Name, faculty, department, age, gender?

Commenced PhD studies? Enrolment status? Educational background?

Financial support/employment status/scholarship?

Relationship status? Children?

Country of birth/citizenship/English as a second language/proficiency?

Supervisory arrangements/initiated by/satisfaction with arrangements?

Purpose of PhD?

Do you view the PhD degree as an original contribution to knowledge, as general research training, or both? What are your main reasons for undertaking a PhD degree?

Interpersonal Aspects of Relationship with Supervisor

How do you get along with your supervisor generally? Are the interpersonal aspects of this relationship important to you?

Personal Aspects of Relationship with Supervisor

Does your relationship with your supervisor have a personal dimension? Does this situation suit you?

Supervisory Style

How would you describe your supervisor's supervisory style? Does this style suit your needs? How directive is your supervisor? How close is your supervision?

Power

Is power an issue for you in relation to your supervisor/supervision? If an issue, power source of supervisor and ability to negotiate? Preferred power source? Are you able to assert yourself in relation to your needs, e.g., resources, contact, guidance, assistance, etc.?

Autonomy

What stage of your research are you undertaking? How autonomously are you functioning? How much guidance are you receiving from your supervisor? Others? Does this situation suit you?

Academic Difficulties

Are you experiencing any academic difficulties? Who do you turn to for assistance? Is this working for you?

Personal Difficulties

Are you experiencing any personal difficulties that are making your studies difficult? Who do you turn to for assistance? Is this working for you?

Progress

How would you describe your progress? How satisfied are you with this progress?

Reasons for answers and unanticipated answers will be followed up.

Subsequent interviews will use the same format looking for change over time.

Appendix 7 - Interview Guide, PhD Supervisor

Background Profile

Name, faculty, department, status, gender?

Number of years supervising PhD students?

Approximate number of students supervised? Successes? Withdrawals/failures?

Teaching time allocated to supervise? Departmental backup/support?

Purpose of PhD?

Do you view the PhD degree as an original contribution to knowledge, as general research training, or both?

Interpersonal Aspects of Relationship with Student

How do you get along with your student generally? Are the interpersonal aspects of this relationship important to you? Do you think they are important to your student?

Personal Aspects of Relationship with Student

Does your relationship with your student have a personal dimension? Does this situation suit you? Do you think having a personal relationship with you is important to your student?

Supervisory Style

How would you describe your supervisory style with your student? Does this style suit your student? How directive are you with the student? How closely do you supervise the student? Do you change your style for other students? What determines your supervisory style?

Power

Is power an issue for you in relation to your student/supervision? If an issue, power source used and willingness to negotiate? Is your student able to assert her/himself in relation to needs, e.g., resources, contact, guidance, assistance, etc.?

Autonomy

What stage of the research is your student undertaking? How autonomously is the student functioning? How autonomously would you like him/ her to be functioning? How much guidance are you giving the student? Does this situation suit you?

Academic Difficulties

Is your student experiencing any academic difficulties? What are you doing to assist?

Personal Difficulties

Is your student experiencing any personal difficulties that are making his/her studies difficult? Have you offered advice/assistance? Do you see this as part of your role?

Progress

How would you describe your student's current progress? How satisfied are you with this progress?

Reasons for answers and unanticipated answers will be followed up.

Subsequent interviews will use the same format looking for change over time.