

Spatiality and the Lives of Nursing Students

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Abstract

This study is an exploration of spatiality and its meaning. It focuses primarily on the experience of nursing students at two Scottish sites, but draws wider conclusions about spatiality from this data. Although the experience of nursing students has been researched in other studies, this is the first study which addresses this experience through the concept of spatiality, which integrates the student experience across different aspects of the life-world. Its theoretical framework is based in phenomenology and in particular the work of Heidegger, but also uses more recent insights from social geography and elsewhere. The philosophy of embodied realism developed by Lakoff & Johnson (1999) is used to argue that embodiment is central to any consideration of spatiality. It is suggested that a framework based on the interlocking concepts of proximity, mobility and possession provides a comprehensive analytical tool for investigating spatiality within discourse. The study involved semi-structured interviews with nursing students across the two sites. These revealed a diverse range of spatial issues relevant to their academic education and practical training as nurses. The topics addressed include the experience of placements, self-directed learning, essay writing and the spatiality of libraries and lecture theatres. The results of the study suggest that consideration of spatiality should be a more prominent feature of educational discourse generally and the discourse of nurse education in particular. It has been neglected in the past because of its transparency and closeness to everyday life, but as with other forms of difference, it has hidden effects. Given the prominence of nurse recruitment and nurse education as issues in healthcare policy, the study provides evidence that the student experience in this area could be improved by a greater awareness of spatial issues.

Keywords: Spatiality Lives, Nursing Students

1.0 INTRODUCTION

‘Space’ is a term which is often used but which defies precise definition. Its very looseness is what makes it useful and ubiquitous, but that same looseness conceals a topic of great complexity and interest. This study is about the relationship between people, space and spaces, and the expression of this relationship in the term ‘spatiality’. Its overall purpose is to show that ‘spatiality’ is a useful concept to use within social research. In this introduction, I outline my reasons for undertaking the study, explain briefly why nurse education was chosen as a field for the empirical investigation of spatiality, and outline its theoretical basis. At this stage I will not attempt to provide evidence or authority for all the claims presented, but will outline the basic argument and provide some background information. Spatiality is a neglected topic for the paradoxical reason that space is too much a part of everyday life, and too transparent, for it to have been systematically problematized. It becomes a problem when, for example, access to some specific space is restricted, or when we do not have enough ‘personal space’, but these problems are solved through coping practices, rather than by the application of spatial theory.

The experience of disability or agoraphobia, or the various disorders of spatial perception, can, however, provide clues as to how our coping with space can break down and cause our spatiality to be brought into question. The epigraph, from Isaac Asimov’s science-fiction novel *Caves of Steel* (Asimov 1956), draws attention to the ways in which spatiality is culturally mediated. The novel depicts a not-too-distant future, in which city dwellers have become frightened of the very idea of open space, and are unable to conceive of exposure to sunlight and wind as natural and desirable. Interestingly, whilst *The Caves of Steel* is acute in its decoding of spatiality, and prescient in its technology (e.g. video-on-demand, swipe cards), it completely fails to foresee any transformation whatsoever in gender relations. Thus, the status of women in the year 2200 is depicted as very similar to their status in 1950’s New York, illustrating the way in which such topics disappear by virtue of their transparency and degree of embeddedness in culture at particular historical moments.

This study attempts to go beyond the everyday transparency of space and spatiality, and to suggest that experiences of spatiality might be differentiated in the way that experiences of gender, identity or sexuality are differentiated. Following Massey’s (1992: 80) assertion that ‘the social is inexorably also spatial’, the spatial approach is the one employed here, but I wish to avoid reifying ‘spatiality’ into something with causal properties and quantitatively-measurable effects (Harré 1998). More simply, and on a personal level, I wanted to know why going for a walk often helps with the thinking process. Even this, as a masculine activity, is problematic, however, and I am aware that there is extensive feminist critique of the ‘phallogentrism’ of spatiality (Irigaray 1987; Deutsche 1991;

Rose 1993; Best 1995; Rose 1995)¹. I have not used this as a starting-point here, since to do so would require an entirely different approach to the data, based on psycho-analytic theory, which I am not qualified to address. The conclusions from the data, however, suggest that assumptions about spatiality have gendered impacts, and it is the purpose of the study to reveal those assumptions.

The intention of this study is thus to draw attention to the importance of spatiality, and to suggest what it might mean to have a discourse of spatiality, in the same way as there are discourses of identity or sexuality. In this study, I use the term 'spatiality' to represent the collective effects of being-in-space, in relation to the everyday lives of nursing students. Space itself is a contested concept, and the study does not claim to provide a comprehensive overview of the philosophy of space². The kind of space to which I refer here is not the mathematical or astrophysical space of relativity theory, but space(s) as lived and experienced by embodied beings. As such, spaces are information sources for such beings, and, crucially, they provide contextual information. Spaces can 'communicate' with us both digitally and analogically (Bateson 1973). I can see a sign which informs me that I am in the 'University of Midshire' or I can deduce from the presence of students, classrooms, academics and computers that I am in a university. The sign is a digital communication whilst the space sends out an analogue message. The two often reinforce each other. As has sometimes been said in the CD (Compact Disc) vs. vinyl debate (e.g. Tiefenbrun 1984), the digital version is more precise but the analogue often communicates more detail and emotion. Essentially, therefore, this thesis takes spatiality to be the way in which spaces and people 'communicate'. Far from being a separation of people from spaces, spatiality, as I will argue, implies that persons and spaces are inseparable. In the following chapters, I argue that embodiment is a necessary starting point for any study involving spatiality, which is explored here through analysis of the stories which embodied nursing students tell about space.

In focusing on this specific group, I make the assumption that there is a 'world' in which the activities of nursing students make sense, both for the students themselves and for the other inhabitants of the world. A number of independent investigations converge on this body-world relationship as the basis of all cognitive activity (Merleau-Ponty 1962; Bateson 1973; Gibson 1979; O'Keefe 1999; Berthoz 2000). Without this relationship there would be no thought of space, time, existence, or anything else. Lakoff & Johnson (1999) argue that the body and its sensori-motor activities in the world are inextricably connected to cognition via spatial and other metaphors. The term 'space' itself is often used metaphorically, and the starting point for any discussion of space is usually a question about what sort of space, from the many 'species' available (Perec 1999), is being discussed. This in turn is partly defined by the disciplinary background of the researcher. Geographers are supposedly concerned with 'objective' physical spaces, whilst psychologists depend on a model of space which separates inner, 'mental' spaces from the external world, although both these generalisations are problematic³. In educational research, there has been little direct consideration of spatiality, which until recently⁴ was regarded as being unproblematic except in specialised areas of research, such as 'classroom environment studies' (Fraser 1986; MacAulay 1990).

An additional reason to choose spatiality as a topic is that it makes connections between disciplines which are regarded as separate for arbitrary reasons of 'academic [or] social... necessity' (Bourdieu 1988: 64). In the current study, I draw on ideas from Heidegger and other 'continental philosophers' (itself a divisive term), from the new 'philosophy of embodiment' exemplified by Lakoff & Johnson (1999) and from social geographers and sociologists. This is in line with the heterodox traditions of adult education, which has itself turned to such areas as humanistic psychology, behaviourism and critical theory for inspiration (Jarvis et al. 1998). In that tradition, the study seeks to explore the difference between 'representations of space' and 'representational space', to use Lefebvre's rather confusing terms (Lefebvre 1991: 38-39). By this I mean that it moves from 'dominant [conceptions of] space' (ibid), which involve a kind of false neutrality, to a more nuanced conception of space in which its affective qualities, and its underlying assumptions, are made explicit. As Merrifield (2000: 173) puts it, in a discussion of Lefebvre: Critical knowledge has to capture in thought the actual process of production of space. This is the gist of Lefebvre's message. Theory must render intelligible qualities of space which are at once perceptible and imperceptible to the senses. Alternatively, Shurmer-Smith (2000: 163) draws on the work of Hélène Cixous to suggest. There is still much research to be done on the way in which people *feel* space(s), research which needs to go beyond mere socially constructed fears and apprehensions. (Emphasis added)

¹ see also Soja (1989) and Harvey (1989) as the objects of some of these critiques

² See Huggett (1999) for a collection of the classic readings in the philosophy of space.

³ See Gregory (1994) for an extensive critique of spatial concepts in geography, and Malpas (1999:30-33) concerning psychological understandings of space.

⁴ see Edwards & Usher 2004 for a recent discussion of spatiality and education

Whether it is possible to go beyond 'socially constructed fears and apprehensions' is debatable, but both the above quotations serve to summarise the intentions of the project. Urry (2002) has stated that 'little empirical research' has been done on spatiality itself, as opposed to its symptoms, such as the ever-increasing demand for travel and 'co-presence', or the parallel increase in the use of Information & Communications Technologies (ICTs). Wenger (1998: 130) draws attention to the 'relations of proximity and distance [which] may facilitate learning' and links these to the creation of communities of practice, and it is worth exploring these 'proximity and distance relations' in detail. This project is thus an attempt to provide theoretically derived and empirically supported answers to questions about how spatiality might be experienced in the processes of learning and acquiring a professional identity. In order to answer these answers, some form of theoretical framework is required, and it is the purpose of the next section to explain what form that might take.

2.0 THE THEORETICAL FRAMEWORK

My purpose here is to describe a theoretical framework based on the concepts of 'proximity', 'mobility' and 'possession'. This is not the only possible way of making sense of the student 'stories' which form the data, nor is it the only way of approaching the concept of spatiality. It is not, however, an arbitrary division, and I argue below that this framework is a powerful tool for relating spatiality to complex experience, in this case the experience of being a nursing student in the process of becoming a nurse. The key meaning which is sought here is that of spatiality. I suggested at the start of this chapter that spatiality might consist of the stories which bodies tell about space. Relations of proximity and distance are likely to be parts of those stories. But there are further questions to be considered. How do we come to have these relations at all? Why is it that we feel at home in one space and not in another? Why, to return to questions about the spatiality of nursing students, can one student work happily in the library whilst another finds it 'completely useless' for studying?

At one level the answers to these questions can be given in terms of individual preferences, but it is important to establish how these preferences come into being. If space were to mean a simple void, an absence of objects, it could not ground the complex range of feelings which, as the data will show, articulate themselves to it. More accurately, feelings are articulated to *spaces*, which are qualitatively different from each other. There are subtle distinctions to be made between 'spaces' and 'places', but for the purposes of this study the essential distinction is between the generic and the personal or specific. Thus, 'kitchens' are spaces, whilst my kitchen is a place (Bordo et al. 1998: 75). I use 'spaces' in what follows because the discussion is at the generic level of 'lecture theatres', 'libraries' etc., but if I were to write about Stirling University library, it would be appropriate to use 'place'. The concept of spatiality is, however, inherent in the concept of place. Malpas (1999: 41-42; see also Casey 1997) suggests that the relationship is reciprocal, with our sense of place being the source for concepts of spatiality, whilst Massey (1994a: 117) cautions against allowing essentialism to creep into conceptions of place, which should be regarded as a dynamic and evolving concept. The concept of spatiality which I wish to develop here is complementary to this non-essentialist concept, and involves spatiality being seen as the experience of place, whilst place is the intersection and interaction of a set of individual spatialities.

'Space' is, then, what Fogel Keck (1994: 20) calls a 'summative concept'. That is, it 'represents a global and extremely complex entity', and as such, has to be analysed in some way in order to provide useful insights or research outcomes. Wenger's 'relations of proximity and distance' provide a clue as to how this analysis should proceed, but are insufficient in themselves to unpack the complicated spatial stories which form the data for this study. There is no direct parallel between geometrical dimensions and the three concepts outlined here, but there is a metaphorical parallel, and the use of three dimensions is intended to give spatiality a 'solidity' or 'depth' which it might not otherwise have. The analytical framework is thus based on the concepts of proximity, mobility and possession. This framework draws on a disparate group of theoretical sources, but draws from Heidegger in asserting that the human way-of-being (Heidegger's *Dasein*) is a way of being-in-the-world (or, more accurately, being-in-a-world). In other words, people do not consist of encapsulated thoughts and feelings which only coincidentally happen to be in spaces. Rather, we are bound up with spaces at a fundamental level, and can be detached neither from our spatiality nor from our temporality (Heidegger 1962: 146). Although Malpas (1999: 42) sees Heidegger's concept of space as unsatisfactory, because of his privileging of temporality, Heidegger's later work (1971a; 1971b; 1972; 1993a) stresses the affective qualities of place upon which Malpas insists, and is therefore useful as a basis for the construction of the theoretical framework for the study.

Space, as a conceptual topic for research, then, needs to be both unpacked and enriched. My argument will be that the activity and experience of embodied individuals is spatial at a fundamental level, and the following section suggests a more precise way of describing different aspects of this activity and experience, using the concepts of proximity, mobility and possession.

2.1 Proximity

Space implies differentiation – if we were able to perceive the continuity of the physical world in terms of energy fields, rather than the lumpy stuff which we call matter, or objects, we might have no concept of space at all. Gibson (1979) points out that there can be no concept of an organism without differentiation from its environment. Provisionally, any such differentiated organism will exist in differing degrees of nearness or farness from the objects which constitute that environment – a rock, a tree, a river, other organisms – and these relations of nearness or farness constitute proximity, or the possibility of distance. As Heidegger (1998: 135) puts it:...the human being, existing as a transcendence that exceeds in the direction of possibilities, is a *creature of distance*. (emphasis in original). The concept of proximity will thus be taken, for the moment, to mean the possibility of distance. Heidegger will reappear below due to his suggestive thinking-through of the phenomenon of spatiality and his desire to get to the ‘bottom’, or ‘ground’ of things, spatial metaphors which are themselves crucial to his work, but first I will further explore the meaning of proximity. As the possibility of distance, proximity is a relationship of concern rather than a relationship of action. I experience proximity to tables, buildings and other people because in some way they are within my range of concerns (Law & Hetherington 2001). This relationship holds even at great (physical) distances (Silk 1998), and is not a question of simple presence, but rather the possibility of presence and absence. It does not, however, encompass the possibility of action across distance. This is a question of mobility, the second of the three interlocking concepts of spatiality.

2.2 Mobility

Mobility, as I use the term here, is the possibility of action over distance. All organisms have a relationship of (im) mobility with their environment, even those organisms which cannot roam around it at will. Plants, for example, are mobile to the extent that they can propagate over distance, and some species (such as bracken and rhododendrons) are sufficiently mobile to be a menace to other species (McCarthy 1994). Mobility, for people, is differentiated across lines of ability, gender, class, socio-economic status, age, ethnicity and so on (Albertsen & Diken 2001). Urry (2001b) also makes the useful distinction between mobility as a right and as a duty, and this distinction will be highly relevant to my discussion of mobility within the data analysis. Again, however, mobility is conceptually limited. Whilst time enters into discussions of mobility in relation to speed, there are times when we hang around, hang out, tarry or dwell in specific spaces. Even to be nomadic is to remain within a static conception of space, according to Deleuze & Guattari (1988). There is thus a question of a time-space relationship which is not that of speed (time over distance) but of what I will call possession (time in space).

2.3 Possession

In connection with spaces, ‘possession’ is what is being represented in ‘making oneself at home’, ‘occupation’, ‘haunting’ or ‘familiarisation’. As a concept, it does not in itself imply a linear scale from strangeness (minimum degree of possession) to cosiness or ‘being-at-home’ (maximum degree of possession). Possession is essentially a conceptual tool to capture the affective relationships which are formed as people interact with spaces over time, and to relate these relationships to the other two dimensions, thus creating an integrated model of spatiality. As I will discuss further in Chapter 2, which presents the framework in more detail, the relationship between space and time which is to be captured by the concept of possession is not contingent, but is fundamental to both of them – one cannot exist without the other, and possession is a recognition of this co-dependency.

To summarise, then, the study uses a three-dimensional analytical framework, based on the concepts of proximity, mobility and possession (the PMP framework). Possession is the relationship of dwelling, of being in space over time, whilst mobility enables possession in that it affords the possibility of moving through spaces, and proximity enables mobility in that it provides the possibility of there being differentiated spaces at all. Whereas ‘proximity’ commonly implies nearness, the term as used here makes it the possibility of nearness, farness or any other relationship of distance. Similarly, mobility is the *possibility* of action over distance, rather than its realisation. The three elements of the PMP framework thus overlap each other and are mutually interdependent. As analytical tools for the empirical data they not fragment it, or disconnect elements of the participants’ experience from their life world. Rather, the intention is to make sense of seemingly random spatial practices and contingencies, and to provide a coherent account of the spatiality of the participants. In order to provide such an account, research questions are required, but before outlining the research questions I will briefly describe the ‘research frame’ of the project.

3.0 RESEARCH METHODOLOGY

Before I move to a discussion of the methodology of the study, there is some unpacking to do in respect of the spatial metaphors most often deployed in this type of research. ‘Exploring’, in this context, implies movement through and around the data, perhaps stopping at interesting vantage-points from time to time in order to note salient

features of the landscape. In exploration, there is sometimes a symbolic objective (the summit, the pole or the lost world) which justifies the journey, but it is the learning experience during the journey which is the significant outcome. Bateson (1973: 22) points out that ‘an explorer can never know what he [sic] is exploring until it is explored’. The creation of hypotheses and the use of experimental methods (“what will happen if we try this?”) is different from the process of entering a discourse to extract shared meanings (‘what will we find if we go there?’).

The initial data analysis, in the form of the coding process, might be likened to an aerial mapping exercise, plotting the co-ordinates of landmarks or places but unable to gain any sense of their atmosphere or inner workings. The data exploration phase attempts to remedy this lack by moving-in on the ground and getting close to the participants’ discourse. In a sense, this is the real exploratory phase, despite Stronach & Maclure’s (1997: 102) characterisation of ‘fieldwork’ in current educational research: The practice begins as an expansive, prolonged and colonially sponsored immersion in exotic cultures.... [f]inally, it is condensed in the 1980s to a notion of fieldwork that involves handfuls of semi-structured interviews clinging precariously to the fading memory of a theoretical sampling rationale. The process of engaging in conversation with the participants is thus in one sense the symbolic objective of the expedition. The outward journey, which involves such expedition-like activities as gathering sponsorship and buying supplies (tapes and books) and the return journey, which involves reflection on the symbolic objective and, in its later stages, dissemination of its findings, are complementary, although there are precedents for expeditions whose perilous return journeys were perhaps more interesting than their objectives, attained or otherwise (e.g. the Shackleton expedition, or the Apollo-13 lunar mission).

Outram (1999: 284), in a discussion of the relationship between exploration and knowledge in the Enlightenment, suggests that: ...exploration knowledge was profoundly at odds with attempts...to find epistemological legitimacy for experiment-based science in a denigration of knowledge based on the senses. Exploration knowledge, as Outram (ibid, p.283) points out, is largely based on trust in the explorer’s veracity in reporting the sense data collected along the way. In this respect, extracts from interviews function like photographs, snapshots from a conversational journey which convey only a partial, filtered sense of their spatial location. The journey is recreated in a different form by the narrative of the research text, rather like the explorer’s slide show. Veracity is thus a function of rhetorical ability rather than reproducible experimental conditions (Law & Mol 2001). This (over-)extension of the expedition metaphor confirms the importance of foregrounding the research process. In this chapter, the extended ‘return journey’ from the data collection begins, even though the data itself lies ahead. As Lakoff & Johnson (1999: 194) point out, ‘[t]he very flexibility of the concept of a journey makes it extremely useful in metaphorical thought’. Describing the research process as a journey avoids the necessity of imposing closure on processes, such as learning or understanding, which otherwise resist closure (Strathern 2000), since the destination of the journey need not coincide with the attainment of such learning or understanding. The use of ‘journey’ and related metaphors of movement thus restores a sense of stability to processes which, as Haggis suggests, might otherwise be unmanageable, or chaotic (Haggis 2002). In the course of exploring the data, I reflect on the importance of the journey metaphor to the educational process, and on possible alternative metaphors.

Describing the research frame will involve detailed consideration of the philosophical ideas which inform it and its relationship to the research methods. The researcher however, exists prior to the research and prior to consideration of any of the philosophical questions discussed below. As the researcher, in conjunction with supervisors and others, pursues research questions, s/he encounter other projects, other texts and other researchers, and these influence the way in which the project develops. Personal and material spatiality surfaces here, in such ways as commuting by train, which provided contact with postgraduates in other departments (English, Modern Languages, Film & Media Studies), and sharing an office in the university. Consequently, the project started with a sense of differentiated distance from colleagues, continual travel and of opening up my own space within the university. All these affected my thinking at an early stage, and the proximity-mobility-possession framework can be seen in outline in these three senses of spatiality. Distance from colleagues is a proximity issue, travel revolves around mobility and having access to one’s own space is about possession, although all three dimensions are inter-related.

There is also a connection between the practicalities of being a situated postgraduate and the nature of the research frame. The physical act of walking from station to university, and the solidity of the terrain and the buildings which I passed on the way, convinced me that a realist approach – one which acknowledged the existence of a mind-independent world – was correct (for me). The phenomenological slant came from an interest in Heidegger, which in turn had been stimulated by an exchange visit to the University of California, Berkeley. Because I was an inexperienced researcher, I was attracted to what seemed like the most obvious and straightforward data collection method – the face-to-face interview – which was also something at which my principal supervisor had much experience. It was suggested that researching nursing students offered a way of accessing a larger pool of participants than would have been available in other areas of adult education. The fact that a second, nursing-only campus existed,

geographically separate from the main university, was seen as a source of spatial interest, and it was also considered advantageous to develop a cross-departmental project.

Finally, although there were good reasons for researching nurse education, I was too much in awe of what I perceived as both the professionalism and high workload of nursing students (Howard 2001: 35) to want to intrude excessively on their lives by using some form of ethnographic or participative method. They were also mainly 'mature students'. Although these constitute a high proportion of the student population overall (Osborne & Davies 2001), mature students are constructed in opposition to 'traditional' students, typically regarded as those aged 17-21 (Agbo 2001: 4). As mature students, nursing students coped with conflicting demands and took their chosen discipline seriously but required different kinds of support from so-called traditional students (Cuthbertson & Smith 2001; Howard 2001). Thus, I approached them in a way which sought to minimise my intrusion as a researcher and my disturbance of their 'balancing act' (Schuller et al. 1999). The circumstances of the research as outlined above are probably similar to those of most doctoral projects. Failure to take these circumstances into account would, however, lead to a false picture of the research process, as Cooper & Woolgar (1996: 148) suggest: ...It is extraordinary that almost all sociological research texts assume that researchers work on their own, make their own decisions and otherwise proceed in isolation of the demands of their colleagues, their institutions and discipline.

Cooper & Woolgar argue that research is a complex interaction between its producer(s), its sponsors and its audience, and that it is problematic for the researcher to make this interaction relevant and visible without alienating the very audience which she is attempting to inform. In the current study, it is suggested that the experience of spatiality is pervasive, and must therefore affect the researcher in some way. More generally, Bhaskar (1979: 69) argues that all scientific research is value-laden, and that the selection of a problem to be addressed is itself an expression of a value judgment. He also argues (ibid: 72-73) that attempts to lay out those values in relation to their effects on the research process (as I attempted above) are futile, since either consciousness of the underlying values leads to the possibility of objectivity, in which case the attempt is unnecessary, or unconsciousness of the same values (despite professions to the contrary) renders the statement misleading. Whilst Bhaskar's argument is logical, a certain amount of background information is desirable in this case, again because the topic itself calls attention to the spatial background out of which activity arises.

Although the circumstances related above are not sufficient reasons for pursuing a particular methodological path, the role of chance and contingency in research has been severely undervalued (Dutch 2001). For example, the work of Lakoff & Johnson (1999) has been influential on the assumptions driving this project, and Sowa (2003) points out that their thinking in turn is heavily influenced by their personal reactions to the teaching of Chomsky in the early 1960's. Whilst this is partly acknowledged in their published work, the full extent of Chomsky's influence is made clear by Sowa's 'insider' knowledge. Were it not for this contingent fact of specific inter-personal contact, the direction and emphasis of Lakoff & Johnson's own research might have been somewhat different. Similarly, my own research direction was contingent upon specific spatial and temporal circumstances. In the next section I discuss in more detail the components of the research frame which result from these circumstances.

3.1 Four levels, and a leap into the unknown

In this section I discuss some theoretical questions concerning the research frame. Crotty (1998) suggests that the formal structure of the research frame should describe its ontology, epistemology, theoretical perspective, methodology and method, and I will use these headings to build a picture of the overall research frame of this project, although the discussion of method will take place in Chapter 4. The discursive separation of the headings does not imply that these are isolated considerations, since the opposite is the case. Each is dependent on the other, in ways which should become clear below.

The ontology of this project needs to be made explicit because the nature of space is itself a fundamental component of any ontology. The Christian Church imposed its own ontology prior to the 'Copernican revolution' (Russell 1961: 521), whilst current Western ontology is based on a Physical-mathematical conception of space (or space-time) as bounded by the curvature of the universe at one extreme and by the existence of some form of fundamental particle at the other. In this ontology, the physical nature of the universe is discoverable by science and can be described in languages of various kinds.

Ontology is described by Heidegger (1962: 32) as 'that theoretical enquiry which is explicitly devoted to the meaning of entities', and Heidegger's project is explicitly to radicalise ontology via the phenomenological study of existence (Moran 2000: 197). This radicalisation situates spatiality at the intersection of human being and world, both of which are conditional on there being an 'earth' which makes the existence of worldly humans possible. The meaning of 'spatiality' within Heideggerian ontology therefore derives from this human-world relationship. The ontological pre-suppositions of the research are that human beings are meaning-makers, rather than meaning being given by the transcendental reality which is 'out there' prior to and regardless of the existence of beings. This is not

to say that there is no such mind-independent materiality, but that such materiality is meaningfully structured by the embodied existence of human beings and their specific features. Our knowledge of this materiality is thus subject to constraints as a result of embodiment, and this gives rise to epistemological considerations, as I will now discuss.

Epistemology is concerned with the possibility of (gaining) knowledge under various conditions of reality, or ontologies. The three main strands are objectivism, constructionism, and subjectivism. According to Crotty (1998), objectivism is concerned with the possibility of certain, value-free knowledge, usually of the natural (as opposed to human) world, and therefore tends to be associated with science and positivism. Subjectivism is at the opposite end of this continuum, and suggests that knowledge is discursively created by subjects and is therefore entirely relative.

Constructionism is in the middle of the continuum, and assumes (broadly) that there are objects, but that our knowledge of them is always socially constructed or mediated, and therefore always partial and provisional. This is an epistemological view which studies in the sociology and philosophy of science have endorsed (e.g. Kuhn 1962; Latour & Woolgar 1986; Latour 1987). The current study situates itself in this middle position, which, as Paley (1998) suggests, is compatible with the Heideggerian position outlined above.

This is, then, a constructionist (Crotty 1998: 42) project based on transcendental realism (Bhaskar 1975: 56-62; 1979). It is based on the idea that there is a reality which precedes (and exceeds) the existence of humans, but which is given meaning only by human cognitive and social activity. This is opposed to empirical realism, in which '[t]he world is what men [*sic*] can experience' (Bhaskar 1975: 58). In Bhaskar's terms, there is an 'intransitive' reality of which we can have 'transitive' knowledge, but which precedes, and is independent of, our existence. If this were not the case, science, and all other forms of knowledge would be impossible. As Bhaskar (1975: 39) argues: To be is *not* to be the value of a variable; though it is plausible (if, I would argue, incorrect) to suppose that things can only be *known* as such. For if to be were just to be the value of a variable we could never make sense of the complex processes of identification and measurement by means of which we can sometimes represent some things as such. Knowledge follows existence, in logic and in time; and any philosophical position which explicitly or implicitly denies this has got things upside down. (Emphasis in original). This position fits with Heidegger's assertion that we are always already 'thrown' into a world (Heidegger 1962: 174). It is important to establish the existence of such a world not only to make the epistemological basis of the study consistent with its theoretical sources, but also to make it possible to talk of 'spaces' as entities, as opposed to space as a relational concept, the subjective/objective distinction discussed by Malpas (1999: 35-38).

There are those who appear to argue for a view of reality, as distinct from *knowledge* of reality, as entirely socially constructed. According to Searle (1995: 157), these include Dummett, Goodman, Kuhn, Feysabend, Putnam, Rorty, Maturana, Varela and Winograd, together with Derrida, against whom Searle's critique is principally directed. Their views can be summed up under the heading of 'anti-realism', and Searle asserts that anti-realism makes it impossible to conceive of 'a reality independent of our representations of it' (ibid). Searle (p.154) argues that: Realism is the view that there is a way that things are that is logically independent of all human representation. Realism does not say how things are but only that there is a way that they are. Searle is clear that this argument does not, of itself, make *any* claims about the way things are, even non-material things like space and time. What is at stake in the world in which we live is the possibility of different *descriptions* of external reality, rather than different realities (Searle 1995: 165). Similarly, Heelan (1983: 279) concludes, in his survey of the hermeneutics of perception, that 'the essence of being a human perceiver is to-be-in-a-world'. The existence of a (spatial) world does not depend on the existence of observers, or 'client-perceivers' as Heelan calls them, but the observers depend on the world. According to Cerbone (2000: 269) Searle's arguments do not function as proof of external realism, but the point which both Searle and Heidegger make, in different ways, is that asking for such proof is itself proof of a misconception about existence. For Heidegger, human being is being-in-a-world, and the notion of a worldless subject is literally nonsensical.

A cave is an example of a space which is independent of human beings in terms of its geological origins, but which fulfils various human purposes and hence acquires multiple meanings, as (e.g.) shelter, temple or art gallery. Its spatial meanings are thus human constructions, whilst the 'facts' about the cave – its length, geological nature or bat population – might be held out as 'objective' by scientists, despite arguments for a socially-constructed dimension of 'objective knowledge' (Latour & Woolgar 1986; Latour 1987; Law & Mol 2001). Law & Mol (2001) suggest that there are in fact specific spatialities which attach themselves to supposedly universal scientific 'truths' or technological objects. Although, for example, a metre is apparently a metre everywhere, it takes effort, expressed across space, to maintain the standard as a standard. Where this effort fails, other standards apply, as on a remote island, where a piece of driftwood might be pressed into service as a standard (but arbitrary) measure.

The same argument applies to a built space such as a classroom – its physical parameters are measurable by science against ‘standard’ quantities, and on one level can be objectively compared to other classrooms. The idea of a classroom, however, is only mobile, or what Latour (1999) calls an ‘immutable mobile’ within a network which sustains its meanings. These meanings, are ‘located’, for its users or, in other words, they are spatially constructed, and so, to use Bhaskar’s term, are ‘transitive’, for example, a ‘classroom’ may have different meanings in, for example, Scotland, Botswana and Hong Kong.

Given that there is a world to be perceived and experienced, then, what would be the appropriate way to gain knowledge of the world in general or about space in particular? It would be possible to measure many of the parameters of student usage of space in ways which would conform to the requirements of a scientific, objective study. The frequency of library visits and the mileage driven to placements could be recorded, or different configurations of seating in lecture rooms could be tested experimentally for their effect on student behaviour. This form of research would not be able to answer the research questions as set out above, however, because these are questions about meaning, rather than questions in which a meaning is assumed. Equally importantly, it would lack the inexactness which, as Heidegger astutely points out, is required for rigorous inquiry in the human sciences (Heidegger 1999: 104). As Cioran (1976: 222, cited in Crotty 1998: 81) eloquently puts it: Our inmost aridity results from our allegiance to the rule of the *definite*, from our plea in bar of imprecision, that innate chaos which by renewing our deliriums keeps us from sterility. (Emphasis in original). It is this inexactness which enables the discovery of new forms of meaning-making activity, whereas the precision of scientific methods enables predictions to be made once these activities have been described. Heidegger (1999: 104) states the same view even more clearly: The ‘human sciences’ by contrast [with the ‘exact’, i.e. Natural, sciences] must remain *inexact* in order to be *rigorous*. That is not a lack, but an advantage of these sciences. Moreover, execution of rigour in the human sciences in terms of performance always remains more difficult than carrying out the exactness of ‘exact’ sciences. (Emphasis in original). Here, Heidegger is concerned to preserve being as that which lies beyond beings and is always in excess of what can be discovered about beings. In doing so, Heidegger, seen in his historical context, is perhaps challenging Weber’s ‘passion for empirical verification or his concern to explain in causal terms’ (Crotty 1998: 71), a passion antithetical to Heidegger’s own project (cf. Heidegger 1999: 101).

A constructionist-realist epistemology has therefore been adopted, in which the independent existence of a material world (populated by embodied beings) is acknowledged, but in which also, knowledge is negotiated and provisional rather than discovered and fixed. Clearly, there is a difficult balance to be attained between shared meaning and personal account, and the next section begins to explore how this might be attained through a phenomenological approach.

3.2 The Theoretical perspective

Given the constructionist-realist stance outlined above, the most likely theoretical perspectives to stem from it might be those aligned with interpretivism, such as symbolic interactionism, phenomenology or hermeneutics (Crotty, 1998: 5). According to Harris (1996: 1): Symbolic Interactionism rests on three primary premises. First, that human beings act towards things on the basis of the meanings those things have for them, second that such meanings arise out of the interaction of the individual with others, and third, that an interpretive process is used by the person in each instance in which he must deal with things in his environment. Although all three of the above premises apply to the current study, the focus of symbolic interactionism on interpersonal relationships and role-taking makes it less useful for the study of phenomena such as spatiality.

Crotty (1998: 79) distinguishes between ‘constructivist’ and ‘constructionist’ approaches, and symbolic interactionism is a constructivist approach in that it ‘describes the individual human subject engaging with objects in the world and making sense of them’ (ibid) whereas in constructionist approaches, we are delivered over to a pre-existing complex of culturally-determined meanings. Phenomenology, far from being about those culturally-determined or ‘negotiated’ meanings themselves, is, in its Husserlian form, about certainty, although it bears a different relationship to certainty from that of traditional scientific objectivism. Phenomenology *seeks* to reach grounds, essences, foundations and ‘the things themselves’, even if it acknowledges that it can never *quite* reach them. It is the ‘way’ (as in Heidegger’s (1971) *On the Way to Language*) which is important to phenomenology, the way which leads through the unmediated experience of existence.

For the researcher results cannot be in the form of ‘unmediated’ experiences, which have to be reduced to language in order that they can be shared. Although the perspective which will emerge in this study is, therefore, not ‘pure’ phenomenology, it is worth exploring the development of phenomenological thought in order to assess its usefulness to the study of spatiality. As Moran (2000: 6) relates, the roots of phenomenology extend much further back into history than Husserl, but his work is generally credited as being the source for its adoption by researchers. Husserl was initially concerned to found philosophy on the certainty of ‘[t]racing acts of cognition to their ground in

acts of clarifying and fulfilling intuition' (Moran 2000: 107; see also 124). This tracing process involved what he called the 'phenomenological reduction', the exclusion of all but pure intuition from consideration by the 'ego'. It is important to note that this reduction excludes the application of theory or logical inference to the data as the experiencing subject (re)cognises it. Meaning should not be imposed on the data in phenomenological research, rather, the data, as pure unmediated experience, *is* the meaning. As Crotty suggests, '[p]henomenology is about saying 'No!' To the meaning systems bequeathed to us' (Crotty 1998: 82). This lack of presupposition itself forms a theory, and the same problem occurs with derivations of phenomenology such as 'grounded theory', as Thomas (1997: 5) and Schuttermaier & Schmitt (2001: 1) both suggest. In defence of Husserl, Spiegelberg (1971: 83), points out that

In Husserl's case, the phrase 'freedom from presuppositions' stands for the attempt to eliminate merely presuppositions that have not been thoroughly examined...It is thus not freedom from all presuppositions, but merely freedom from unclarified, unverified and unverifiable presuppositions that is involved. Despite this proviso, and as Husserl and his critics realised, the attempt to 'bracket out' what Heidegger (1962: 34) calls the 'ontic' manifestations of the 'life-world' was highly problematic (Bell 1991). These ontic manifestations - physical objects in space and time, and assumptions and prejudices rooted in everyday life - are not easily eliminated. As Moran (2000: 191) puts it; '[t]rue phenomenology, for Husserl, cannot be founded on any science of human being' (cf. Bhaskar 1975: 56). Husserl intends the opposite, which is to found all science on phenomenology. This is the basis for Husserl's dispute with Heidegger over the latter's appropriation of phenomenology in *Being and Time*. Husserl viewed Heidegger as doing a form of anthropology rather than true phenomenology, as did Heidegger himself in his later work (Brandom 1992). Nevertheless, Heidegger's project, in *Being and Time*, is ontological, whilst Husserl's grounding of science is epistemological.

Whilst Heidegger sought to show how human being manifests itself in the everydayness of (for example) 'coping', 'mood' or 'guilt', Husserl searched for a 'transcendental idealism' (Moran 2000: 190), radically separate from everydayness. For Husserl, the everyday life of things and individuals acted to *obscure* the phenomena, the 'things themselves'. Heidegger criticised Husserl in turn, rejecting transcendental idealism, the idea of pure description (that is, without interpretation) and the lack of concrete historical thinking in Husserl's work (Moran 2000: 20), although Levinas (1998: 131, cited in Moran 2000: 327) attributes to Husserl: ...the principal intellectual means for substituting a human world for the world as physico-mathematical science represents it. Heidegger, against Husserl, sees everyday life on two levels. Firstly, it amounts to a lostness, a forgetfulness or a covering-up of being (Heidegger 1962: 264), in which human *beings* are absorbed in, and carried along by, a complex of cultural practices and norms. Heidegger refers to this state as '*Das Man*', the 'they' or the 'one' as in 'this is what one does...' At the same time, the modes of human relations to things within a world, as equipment or otherwise, are the means to 'unveil a primordial kind of being of *Dasein*' (Heidegger 1962: 210). Heidegger is ostensibly no more interested than Husserl in exploring the cultural practices and norms which shape everyday life, although as Fritsche (1999: 59; see also 188) points out, Heidegger himself partakes of these cultural practices in a highly politicised manner, and they permeate *Being and Time* just as much as they do the popular newspapers of the time (Holub 1999).

This is not just an arcane point of philosophical debate, however, since it fundamentally affects the conduct of the research process. Husserl is not an empirical researcher, but is concerned with the nature of representation and cognition, with *how it is possible* to have knowledge of anything rather than with acquiring knowledge as such and although Heidegger continually reiterates that he is interested in Being rather than (human) beings, he seems more attuned than Husserl to the complexity of how humans cope with the world⁵ Both Heidegger and Husserl thus pose difficulties as 'guarantors' of a phenomenological theoretical perspective. The point of research, for Heidegger, is not the validation of a hypothesis but a questioning leap into the unknown. The reduction of the world to 'lived-experience' and thus to representation is, in Heidegger's view, a disaster (Heidegger 1999: 92-93). This, of course, opens up the paradox of how to represent a phenomenon, such as spatiality, which lies somewhere between representations of lived experience and 'the things themselves'. The experience of spatiality is always more than can be adequately represented. The only way in which I can know this to be the case is through my own experiences, but I can only describe these through language, and thus through the cultural categories which are embedded in it. On the other hand, acknowledgement of the existence of an external world means that there has to be an excess of 'world' over 'experience' – how can I describe what is happening in a distant part of the world, or even behind me? This is not a problem unique to the study of spatiality, and it means that a study such as this can only provide a partial description of that aspect of experience which it chooses to describe.

⁵ See Føllesdal (2000) for a defence of Husserl against Heidegger's, and Dreyfus's, critique, and Dreyfus's response to Føllesdal in Wrathall & Malpas (2000)).:

The reason for the extended discussion of phenomenology here is to emphasise that this point has been problematic even for those, such as Husserl and Heidegger, who have spent most time in thinking about it. The lesson which must be drawn from study of the primary sources of phenomenological thought, by would-be phenomenological researchers, is that neither Husserl's 'bracketing-out', in the 'phenomenological reduction' nor Heidegger's 'thinking the question of Being' can themselves form the sole basis of viable research methodologies, and conversely, that many of the research methodologies which claim to be phenomenological are misinterpretations resulting from the absorption of phenomenology into various Anglo-American research traditions (Paley 1998; Searle 2000: 71-88). Searle makes the point that there is no reason why phenomenological and causal explanations cannot co-exist, provided the question permits these forms of explanation, but the debate continues within nursing studies and elsewhere as to whether it is possible to conduct phenomenological research in the true Husserlian sense (Crotty 1996; Yegdich 1999). The current study uses a derivative version of phenomenology, a version which Benner (2000: 299) calls 'interpretive phenomenology', in which descriptions of phenomena are sought via their symptomatic representation in speech, writing or other representations. This would seem to preclude any direct access to the phenomenon of spatiality, but there is a way round this problem, through the study of spatial metaphor. Pratt (1992), however, cautions that. Although some of the spatial metaphors circulating through contemporary academic discourse are useful aids for problematising positionality, others dress up and potentially reproduce some very conventional intellectual subject positions (for example that of the distanced observer), underwrite new sets of dividing practices, and promote a remarkable arrogance or naivety towards the construction and destruction of and caring for places.

Speech and writing are forms of language, and Hardin (2001: 13) suggests that post-structuralist understandings of the self as constructed through language negate the 'unspoken assumption that individuals are free acting agents', and suggest that discursive positioning, or the emergence of the subject from language, constrains action. Recent thinking on the relation between cognition and embodiment, however, suggests that linguistic constraints on thought are consequences of embodied action (Lakoff & Johnson 1999; cf. Regier 1996; Lakoff & Nunez 2001). Lakoff & Johnson argue that it is bodily action in the world which produces language, via metaphor, and that attempts to disembodify language, as with analytical philosophy, are doomed to fail as explanatory frameworks for reality. The zone of slippage in which language moves from *being* a metaphorical space to being *about* space is thus an important methodological area, and it is important to separate *representations of space* from the *lived experience of space*, a point made explicit by Lefebvre (1991: 44-6) and further developed by Soja (1996). Heidegger goes further, regarding even 'lived experience' as a reductive concept, and implying that the reduction of being-in-the-world to 'lived-experience' which 'knows no limits' is ultimately a refusal to acknowledge the finitude of human, spatial existence (Heidegger 1999: 91). For Heidegger, live[d] experience is the domination of being by human self-representation. How might this affect what can be researched, or indeed the desirability and meaning of research itself? How can we reconcile the insight that embodiment brings the world into thought with the notion of beyondness and the critique of 'lived experience' as reductive? To some extent these questions have to be set aside in the current context, but there remains the question of the extent to which the experience of spatiality can be shared and represented.

Heidegger's explanation of interpretation (1962: 188-195) supports the idea that all interpretation is predicated on prior understanding, or 'fore-sight' (*Vorsicht*). Our interpretation of a door is predicated on an understanding of the way in which it relates to rooms, corridors, hinges and doorknobs. We know what doors do, and interpretation builds on that understanding. If someone slams a door and locks it from the inside, we might interpret that as a demand for 'personal space'. Alternatively, an open door to a professor's office might signify her availability for consultation. The key element is the *sharing* of this understanding. Even 'self-professedly subjectivist' accounts, which Crotty (1998: 83) sees as typical of the kind of phenomenology mainly practised by American nurse researchers, depend on shared understandings to make interpretation possible. In Heidegger's account, these shared understandings are *not* the object of his questioning, but a means to another end entirely: the clarification of the question of being (*Seinsfrage*) itself. Although the current research addresses spatiality *via* the study of human relationships with space, or, more precisely, nursing students' relationships with space, these relationships are not its object. Rather, its object is the phenomenon of spatiality itself.

This is a phenomenological study in that I am attempting to access a phenomenon which I have labelled 'spatiality' via the lived-experience of a group of participants. Lawler (1998:105) points out that researchers in this tradition are 'asking different questions and seeking to know the world differently'. As Crotty relates, phenomenology and research have had a complex relationship, especially in nursing, and there have been misunderstandings of both principle and method (Crotty 1996; cf. Lawler 1998). Even given the understandable focus of nursing research as being on the patient, as opposed to phenomena such as pain or stigma (Thorne et al. 2002), Crotty (1998: 48) sees: a rampant subjectivism...in the turning of phenomenology from a study of phenomena as the immediate objects of appearance into a study of experiencing individuals.

The current project is about the phenomena of ‘space and spatiality’ and is not about individuals as such, but even phenomenological researchers need to work with research participants to provide data: introspection is not enough. Green & Holloway (1997: 1015) argue that the phenomenological approach has a humanistic ideology that nursing, with its own discrete professional values, can both identify and feel comfortable with. These professional values include...participative aspects that emphasise the actor’s own meanings and interpretations. It is arguable whether, in fact, phenomenological approaches do have a ‘humanistic ideology’. Heidegger in particular has been accused of ‘anti-humanism’ (Holub, 1999) and indeed has denied being a humanist in his own writing (Heidegger 1993c). Nevertheless, the empirical component of this study is about how nursing students experience spatiality as they cope with their world. Thus, the study is not truly phenomenological, but involves a series of prior assumptions about, for example, who nursing students are and what spatiality might mean, with further assumptions about embodiment and its inseparability from spatiality. Spatiality is thus a phenomenon which can be further explored and conceptually enriched through the study of everyday practices and their related affective states. In the introduction, the evolution of the research questions was traced in the following table:

Figure 2: the research questions again

Question	Reason for asking	Body of knowledge to which study might contribute
What is meant by ‘spatiality’?	Own interest	Theories of space
What is meant by spatiality in the context of nurse education?	Attempt to cross disciplinary boundaries, reinforcing and deepening analysis of previous research in field	Theories of space, nursing literature
How does spatiality affect lives of nursing students?	Desire to enhance student experience, lack of attention to spatiality in nursing literature	Literature of student experience within nursing literature

In the current study, it is suggested that answers to questions about student experience might be used to provide knowledge about *the way in which spatiality is experienced*, rather than simply providing knowledge about specific aspects of the student experience itself. To do phenomenological research, as I use the term here, is to derive descriptions of phenomena from descriptions of everyday life. This in itself constitutes critical activity (Crotty 1998: 112) since for both Husserl (Moran 2000) and Heidegger (1962), the existing state of our understanding of the relationship between phenomena and natural science (for Husserl) or Being (for Heidegger) is unsatisfactory. To engage in further analysis of everyday life is, however, to engage in *cultural*, as opposed to philosophical, critique, and to move beyond phenomenology (Paley 1998). Heidegger provides no clear statement of how the disclosures of phenomenology are to be applied in everyday life and indeed, claims that ‘[p]hilosophy is *useless* but at the same time masterful knowing’ (Heidegger 1999: 26, emphasis added). By ‘useless’, here, Heidegger specifically means that true philosophy does not partake in ‘machination’ (ibid), the quantification and reduction of everything to efficient use. Providing specific recommendations for practice is thus not, in Heidegger’s view, the point. It is therefore, difficult and indeed pointless to attempt ‘pure’ phenomenological research, which would have to ‘bracket out’ all the external factors mentioned above. On the other hand, thinking about phenomenology can help to identify whether there is a phenomenon to research at all. Additionally, the humanistic tradition imposes an ethical obligation on researchers in which outcomes related to the needs of the participants are considered to be important (Moch & Gates 2000). The current study attempts to address these considerations, and is intended to have outcomes at three levels. At the level of the ‘useless’, the study should provide an argument for the existence of something called spatiality. At the level of lived-experience, the study should provide a medium for the discursive contributions, or ‘voices’ of the participants to be heard. Finally, at the level of ‘machination’, the institutional level, the study should provide some guidance for the improvement of whatever might be found to contribute to a ‘positive’ spatiality. In the next section, I will discuss methodologies which might contribute to achieving these aims.

3.3 Methodology Designe

It is not my intention here to engage in a debate between qualitative and quantitative methods which Flyvbjerg (2001) has shown to be partly the result of social science attempting to predict the unpredictable. Educational research is currently under pressure to produce predictive results based on numerical evidence as in random controlled trials (Moore et al. 2003). Chiarella (2002: 202-204) draws attention to the predominance of qualitative research in nursing studies, and suggests that this ‘has been accorded lower status [compared to methods such as random controlled trials]

as a means of providing evidence about practice' (see also Smith 1994). The qualitative/quantitative debate is ultimately fruitless, according to Schuttermaier & Schmitt (2001), as it is confusing 'method' with 'methodology', but in Chiarella's view, the use of qualitative methodologies forms part of a long struggle to differentiate nursing from medicine.

Because of the 'outsider status' (Chiarella 2002: 31) of the current study, which is based neither in nursing studies nor in a 'positivist' field such as medicine or experimental psychology, there is no clear disciplinary tradition to influence the choice of a particular methodology. Educational research itself has been subject to heated debates about appropriate methodologies, and whilst the methodology of the study must ultimately be determined by the research questions, there is also an element of partiality, stemming from the personal context of the research. In the decision to side with those nurse-researchers who have opted for a qualitative approach. This is not to say that all those involved in nursing research are open to such methods and methodologies. Moch (2000: 127) gives the example of a journal article (on the topic of the researcher experience in qualitative research) which was rejected because it had, in the reviewer's (only) words 'No Objectivity!'. As Usher (2000: 54) points out, we should 'take nothing for granted in doing research', but as he also emphasises, research takes place in a worldly context and is not some form of 'transcendental activity'.

The use of a qualitative methodology is, however, primarily justified and required by the affective and experiential nature of the phenomenon in question, rather than by any disciplinary tradition. There are, of course, many variations on the qualitative theme, such as: grounded theory studies, phenomenologist, ethnographies [and] a wide range of less prominent methods, such as narrative analysis, qualitative case analysis, discourse analysis, participatory action research, naturalistic inquiry, feminist methodology, and biographical analysis (Thorne et al. 2002: 9) The predominant focus of nursing research is the nurse-patient relationship in its many forms (Chiarella 2002: 203) or '...human responses to actual or potential health problems' (Reynolds & Cormack 1994: 159), and it is therefore rooted in a dialogical, person-centred view of research.

In the previous chapter, I argued that the best approach to the study of spatiality would be to use a three-dimensional model (the Proximity-Mobility-Possession framework) which started from assumptions about embodiment and the existence of physical reality, albeit a reality which might be described in various ways. Each of the three 'dimensions' represents an aspect of the experience of space, related to distance, action and time. The conceptual framework is predicated on 'mine-ness and the existence of an intimate self which constructs or locates itself within a world of shared practices and meanings. This suggests that, in order to access knowledge about spatiality, there has to be a contribution from the intimate self of the other, and phenomenological research raises questions about the possibility of acquiring knowledge of, or from, the other. Husserl (1960: 114-115) puts it thus: The character of the existent 'other' has its basis in [a] kind of verifiable accessibility of what is not originally accessible. Whatever can become presented, and evidently verified, originally - is something I am; or else it belongs to me as something peculiarly my own. In other words, I cannot directly access the experiences of the other, but can relate to it only insofar as I have access to shared experiences, or at least a similar reality to that of the other.

4.0 CONCLUSION

The objective of this chapter is, as the epigraph suggests, to form a consistent whole from the data and the theoretical framework which has been used to make sense of it. I attempt to form this 'whole' into a set of conclusions, and I also examine whether the study could have been done differently, its strengths and weaknesses, and what I have learned from doing it. Finally, I will argue that the study has produced answers to its research questions, and that these are a useful contribution to the field of social research, particularly the kind of 'phronetic' social research advocated by Flyvbjerg (2001). That is, it does not attempt to provide epistemic knowledge, in the sense of generalised scientific 'facts' about phenomena. Neither does it attempt to provide technical 'know-how' about the performance of tasks. Rather, it provides what Flyvbjerg calls 'practical wisdom' derived from, and applicable to, one specific set of spatio-temporal circumstances. Although the concept of practical wisdom includes an element of intuitive judgement, it also incorporates detailed examination of circumstantial evidence.

As Flyvbjerg suggests, phronetic research takes account of the complexity of human life and its embeddedness in a material world. Embodiment is thus an essential element of the study, and I argued that it is meaningless to explore 'spatiality' in the context of student experience (or any other context) unless it is taken to mean 'embodied spatiality'. Using this as a starting point, I developed a theoretical framework, based on the interlocking concepts of proximity, mobility and possession. I argued that these can be used to make sense of the issues and practices which emerge from various forms of data. Spatiality thus represents the collective effects of being-in-space for embodied human beings. This is not to say that there are no imaginary spatialities, for as Anderson (1983) suggests, even nations are imagined spaces, but my argument has been that spaces mediate activity and

interaction, and that this mediation generates a sense of spatiality in a complex reciprocal relationship between individuals, groups and cultures.

The proximity-mobility-possession (PMP) framework suggested here does not constitute a ‘theory of space’, but rather, it suggests what the pre-conditions for being able to apprehend, or to ‘grasp’ space(s) might be (Lefebvre 1991: 40). In other words, it enables the rather fuzzy concept of space to be discussed with greater precision and insight. In describing a house, we might use the word ‘big’, but if we unpack this by specifying the architectural style, the number of rooms, the floor area and ceiling height and its distance from the road, we begin to grasp it in its materiality spatiality. In this way, the three-dimensional PMP framework was helpful in analysing the interview data, but the question here is whether it can be re-used elsewhere. Within the concept of phronetic research, the framework, as a sense-making device, is a tool for use within located and bounded situations. Other users of the tool may come to different conclusions, or produce different answers to different questions, but the essential form of the tool should remain the same. As Burden (1998: 17) puts it, describing a similar small-scale study: the value of this methodology...relates to its ability to focus in detail on a small but significant facet of a broad and complex social setting. While it may be argued that such detailed examination prevents replication and extrapolation to the wider population, this kind of study has the potential to contribute exemplars of social action to the institutional setting. These ‘exemplars’, or patterns, of social activity are, in this case, underlying spatial assumptions, metaphors and practices which influence, but cannot predict, behaviours. These assumptions apply as much to the researcher as to the researched, and I have argued that this is not a ‘pure’ phenomenological study in the Husserlian sense, in that I am unavoidably bringing both theoretical and personal assumptions to bear on the material. The study is about foregrounding these assumptions and their impact on the lives of the students concerned. In itself it has little or no predictive value, but the perceived importance of predictive value is itself symptomatic of a set of assumptions about the rule-governed nature of reality and the appropriateness of particular research methodologies (Flyvbjerg 2001). The concepts developed here have proved to be useful in understanding the spatiality of other research situations e.g. in organisational learning and the early professional development of teachers.

Equally, some existing studies of nursing student experience refer implicitly to some of the spatial issues raised here, and those which draw on empirical evidence from nursing students support my conclusions about the ways in which their experience is problematic, particularly in relation to placements. Using the framework to re-examine existing research thus confirms its value as a sense-making tool.

4.1 Proximity, Mobility and Possession

I have shown above that the proximity-mobility-possession framework (PMP) is a useful way of approaching empirical data concerning space & spatiality. As Soja (1996) points out, there are references to at least 90 different ‘species’ of space in Lefebvre’s *The Production of Space* (1991), some of which are in common use, such as physical-, social-, personal-, mental-, literary- and cyber- space. This unmanageable heterogeneity of spaces, in my view, is best understood through the use of the PMP framework, although there is an argument, which I have touched upon above, that being able to ‘manage’ something implies a certain way of looking at the world, a techno-rationalistic paradigm characterised by Heidegger (1993b) as ‘enframing’ (*Gestell*). Conversely, if the meanings of all these spaces are incommensurable, for example if there is nothing in common between physical space and literary space, then why call them ‘spaces’? This is where Husserlian ideas about essences were useful in thinking about what the essence(s) of space might be, or whether there is an underlying framework which enables us to have a conception of space which can equally well handle the school playground (physical space), James Joyce’s *Ulysses* (literary space) and the internet (cyberspace)? The framework which has been developed here can do this.

The table below (figure 6) demonstrates some possible parallels:

Figure 6: The PMP Framework and types of space

	Proximity	Mobility	Possession
Playground (physical space)	School, shops, busy road, parents, teachers	Disabled access, crowding, timetabling	Teacher/pupil relations, smoking area, bullying
Ulysses (literary space)	Identification with characters, situatedness of text (in Dublin; in historical context)	Literacy (ability to move around in text) Text as cross-cultural object	Feeling at home within text, using text as basis for other writing
Internet (cyberspace)	Awareness of interesting websites	Computer literacy, access to hardware/software	Own website, prominence in search engine results

It is noticeable that the parallels between these spatial types themselves depend partly on the use of spatial metaphors. The discussion of spatial metaphor and the work of Lakoff & Johnson (1999) and others (Merleau-Ponty 1962; Gibson 1979; Sanders 1999; Kelly 2000) suggests that the embodiment of spatiality is the key to understanding why it has such a basic role in both mundane action and language. To construct a typology without attempting to understand this basic role in more depth risks the 'unmanageable heterogeneity' to which I referred above. As Lakoff & Johnson (1999) have suggested, cognitive activity is inseparable from embodied activity, and is connected to it via embodied metaphors. Although the evidence from this study does not relate directly to cognitive activity, it supports their views about the importance of embodied spatiality as a basis for the manipulation of ideas (as in the metaphor I have just used). The use of spatial metaphors can be shown to have physical-spatial consequences. The notion of *self-direction* in the metaphorical space of learning becomes problematic when students are disorientated in physical space. *Gathering* material for essays is stressful because, like gathering fruit, the best examples are sometimes hard to reach. Yet students are not supposed to be *spoon-fed* because that would position them as baby-like and helpless. The point here is that consideration of the metaphors used to communicate ideas can reveal entire schemas, metaphorical domains which determine how we think and therefore how we act.

Learning should not, then, be seen as a purely cognitive activity, which happens to, or is performed by, a disembodied mind. Both in a practical and a conceptual sense, learning is inseparable from spatiality and embodiment (Michelson 1998). Jarvis et al. (1998: 27) point out that certain forms of learning can be performed satisfactorily using a behaviourist model. Their example is, fortuitously, the 'square-bashing' by which military recruits learn drills and disciplines. This is a prime example of learning which is entirely predicated on spatial arrangements and embodied activity, but it is not part of the adult education 'repertoire'. More relevant models of learning style, such as the 'deep/surface' distinction, or 'field dependence/ independence' depend on spatial metaphors for their explanatory power, as I have argued above, but do not in themselves address the issue of the spatiality of learning. The conclusion which can be drawn from the current study, however, is that the embodied spatiality of the student affects the performance of activities related to learning. This is not the same as saying that spatiality affects learning outcomes, which is not a question within the scope of the present study, because it would have been necessary to have an *a priori* concept of spatiality, and probably a longitudinal study, in order to establish whether this is the case. Such an *a priori* concept was not available, but the framework proposed here goes some way towards providing one. For ethical and practical reasons, it would be difficult to set up an experimental study which compared the learning outcomes of two or more groups using different spatial models (Moore et al. 2003). The present study gives a certain amount of support to the idea, based on the differing experience of students across two campuses, that spatialities affect the experience of learning, but that is not the same as affecting learning outcomes.

Current educational research in different contexts does not provide answers to these questions. For example, Blatchford et al. (2003), in a comprehensive re-assessment of school class-size research, make no reference at all to the spatial aspects of the classroom, yet Horne's (1999) unpublished research suggests that spatial factors may be significant variables in determining learning outcomes in relation to class-size. The present study provides evidence for spatial effects which warrant further research. In the discussion of the research questions below, I discuss how the spatial agenda might be taken forward in the context of nurse education. Firstly, however, I critically examine possible objections and alternatives to the way in which the study was conceived and executed.

4.2 Objections and Alternatives

The four main features of the study are that it takes 'spatiality' to be worth investigating, it used a theoretical framework based on the concepts of proximity, mobility and possession, it focused on the experience of nursing students, and it used qualitative, interview-based methods to obtain data. It is, however, important to consider what the alternatives might have been. I have already discussed the reasons for choosing to focus on the experience of nursing students, so will concentrate here on the theoretical framework and the methods used to collect data. The objection can be raised that the analytical framework used here is imposed on the data rather than being grounded in it. This can be answered in two ways. Firstly, there is a sense in which any research project imposes a framework on the data by virtue of asking a particular question about it, or indeed by virtue of defining something as 'data' in the first place. The question for this study was a question about the experience of spatiality amongst a specific group of students, and even in a general sense this involves several assumptions about the nature of experience and the nature of space, in addition to assumptions about what it means to be a 'student'. Deriving additional themes from the data can, of course confound these assumptions but only via a process of interpretation which itself involves assumptions about meaning.

Secondly, the framework is a heuristic device which provides a basis for interpretations of the data. There might well be other possible ways of analysing spatial experience, but the criteria for using insights derived from these alternative methods will also be different. To use an analogy, a chef, a food technologist and an environmental

campaigner might regard the same bowl of soup in three distinctive ways. The chef sees combinations of flavours, the food technologist sees production methods and storage characteristics and the environmentalist sees an endangered species⁶. Each imposes a pre-existing framework on to the 'data', and each analysis contributes to a field of knowledge about the dish without negating the contribution of the others. Bell (1992), for example, proposes a framework for the study of social phenomena based on the concept of embodied ritual, which might have served instead of the framework used here. Equally, a framework based on the construction of gender might have produced interesting results. Thus, the proximity-mobility-possession framework which I use here contributes to a field of knowledge about student experience without excluding the possibility of alternative modes of analysis. A further insight here is that temporality and spatiality are interwoven, and had I started from a temporal perspective, space would have unavoidably opened up alongside it. The choice of spatiality as a topic was a fortuitous one and, along with temporality, it remains a rich and complex source for further work.

Equally, the study has been concerned with the spatial practices of a small but vital part of society, rather than theories of space, which have arisen in physics, mathematics or philosophy. Nor has it been concerned with images and symbols of space, a task which has been addressed by Markus (1993) in relation to build space. It has argued, however, that the dominant conceptualisations of space to which Lefebvre (1991) refers are related to some of the assumptions which underlie current educational practice. The dominant assumptions amongst these are that space and spaces are homogenous, neutral containers of activity and that their manifestations as spatiality are not important objects of study.

Lefebvre (1991) has argued against this spatial neglect, and another approach to the framework would have been to use Lefebvre's distinction between *spatial practices*, *representations of space* and *representational spaces*. (Lefebvre 1991:39; see also Soja 1996). The notion of a trialectical relationship between these three terms, the perceived, conceived and lived, is itself an interesting theoretical move, overcoming as it does the limits of binary approaches to power and space. Lefebvre suggests (1991: 38-39) that 'the spatial practice of a society is revealed through the deciphering of its space'. Whilst this is what I attempt in the current study, there are questions as to how far this repeats the detached 'view from nowhere' (to use Nagel's (1989) phrase) which is critiqued by Haraway (1995). Lefebvre further argues that representational space is 'space as directly lived through its associated images and symbols'. Thus, in medieval Christian societies, the images of Heaven and Hell, the cosmology which maintained those images and the sacred architecture of churches and cathedrals formed a whole within which a certain set of spatial practices made sense. These spaces were themselves not the result of representations, whereas under capitalism, representations of space are, as conceptualised space, '...the dominant space in any society (or mode of production)'. Thus cities are shaped by a planning process based on a set of technical conditions and aesthetic judgements which in turn depend on a specific mode of production. Lefebvre points out that it is not his intention to create an abstract model of spatiality, but to find a way of grasping the 'concrete' (1991: 40). His work certainly offers a rich source of spatial insights, some of which are applicable to the issues under consideration here⁷.

Doreen Massey (1992) has also pointed to some of the political (in the widest sense) tensions resulting from the neglect of the spatial in favour of the temporal and the social, which she argues is the result of both a false binarism in separating the two, and a gendered denigration of the 'chaotic' materiality of the spatial (Paechter 2003). The results of the study support this view, although it has not attempted to focus specifically on the gender implications of spatiality. Spatiality is, however, messy, paradoxical and cannot be tidily 'optimised'. A library may be too overcrowded for one student and too quiet for another, resulting in loss of useful working time for both of them. A long journey to work can be constructed as 'heroic' or 'insane' or 'normal'. Nor can space be 'tidied-up' by pretending that it has been abolished, as is the logic of the trend towards on-line education in its various forms. The world-wide web has increased the chaos of the spatial, bringing multiple worlds to the desk-top. This is creative chaos, and the point of Massey's argument is that, in one sense, this is what spaces are for. In this spirit, the current study thus attempts to reconcile the elements of Lefebvre's triadic model and, in producing the PMP framework, to suggest a useful way of continuing to explore spatiality in the emancipatory spirit which underpins his work (Lefebvre 1995: 238) and which also underpins much nursing research (Francis 2000).

In terms of the research method, one conclusion of the study is that spatiality need not be an explicit element within discourse in order for it to be an important element in the underlying experience. I am assuming here that there is such a thing as an underlying experience-of-action, even although its *meaning* may well be constituted as such

⁶ See Morgan (1993) for another illustrated example of this.

⁷ There is also a view, represented by Blum & Nast (1996: 559) that Lefebvre follows Lacan in building 'heterosexism' into his trialectical model, which parallels Lacan's 'real, imaginary and symbolic registers of subjectivity'. This may or may not be the case, but it does not invalidate Lefebvre's contribution to spatial thought.

by the discursive act itself. The fact that an action may be described in a number of different ways does not mean that it has no existence outside of those descriptions, merely that its *meaning* has no existence outside linguistic descriptions (Searle 1995). Consequently, conversations about experiences of activity are the most accessible way of developing shared meanings (Davis & Harré 1990). Furthermore, the experience of embodiment, even although it may itself be differentiated, forms a basis for the understanding and analysis of such shared meanings. The question is whether the same outcomes, in terms of student-related issues, could have been generated differently. The answer is probably ‘yes’, as many of the issues raised by students might have been elicited by questionnaire-based research of the type often used to evaluate courses or other institutional activities. In fact, research of this type was carried out (for a different purpose) at an early stage in the project (Gray 2000), and helped to frame some of the questions in the interview schedule. Questionnaires, however, cannot substitute for the depth of a conversation. This itself is a spatial issue – questionnaires are generally completed in the absence of the researcher, who therefore ‘loses’ possession of the space in which they are completed, subject to distractions. The social frame of the interview situation generates different senses of possession for researcher and researched, but these are, at least in principle, accessible to the researcher.

Moreover, interviews have the advantage that participants can reflect on their intentions in performing particular actions. Conversely, interviews are artificial situations whose direction is inevitably skewed by the researcher, even if there is a sufficient degree of ‘participatory consciousness’ (Hesushius 1994) for the interviewee to be able to ‘own’ her contribution. Some researchers (Hormuth 1990; Kesby 1999; Edwards & Clarke 2002) have used methods other than direct interview in similar projects. These have involved graphical media, such as auto-photography, token-based diagrams or hand-drawn maps to elicit participants’ sense(s) of space in relation to specific issues. I did not feel that these methods would deliver sufficiently fine-grained information for my purposes, and that there would be at least as much, and probably more, uncertainty over the interpretation of photographs or maps as there was in the interpretation of texts. Additionally, as a novice researcher, I was apprehensive about approaching students at all, and felt that requests to draw maps, keep diaries or take photographs would add to the burden which I was imposing, a view confirmed by other researchers who have experimented with these methods (e.g. Clarke 2004). This is not to say that such methods are of no use, and with hindsight, a method such as map-drawing might have been valuable.



4.3 Does the study answer its research questions?

Figure 7 sets out the research questions which were first posed in Chapter 1 (p.14):

Figure 7: The Research Questions revisited

Question	Reason for asking	Body of knowledge to which study might contribute
What is meant by ‘spatiality’?	Own interest	Theories of space
What is meant by spatiality in the context of nurse education?	Attempt to cross disciplinary boundaries, reinforcing and deepening analysis of previous research in field	Theories of space, nursing literature
How does spatiality affect lives of nursing students?	Desire to enhance student experience, lack of attention to spatiality in nursing literature	Literature of student experience within nursing literature

The first question seeks the meaning of spatiality. Has this small-scale study of an apparently specialised aspect of spatiality led to an enhanced understanding of this elusive concept? I have argued that spatiality, as the human way of *experiencing* space and spaces, comprises three elements or dimensions, all of which relate in some way to embodiment. My central argument here has been that spatiality is part of what it means to be human, in the same way in which sexuality, identity and other relational concepts are parts of being human. Not only does spatiality interact with other relational concepts, however, it also provides the means to think about them and the terrain on which they are enacted.

By stressing embodiment as a necessary precondition for experiencing spatiality, I also acknowledge the existence of a physical reality (‘earth’, to use Heidegger’s term) which grounds and supports embodiment, but distinguish it from ‘world’. ‘Worlds’ are networks of meaningful relationships, and humans are beings-in-the-world, and in order to function, or even just to be-in the world, the following three elements are essential. The first element is proximity, which establishes the possibility of distance. Proximity can describe the networked characteristics of experience, as a measure of the intensity of a network relation. Proximity also provides a way to move beyond ideas

of 'inside' or 'outside' in relation to institutions. The second element is mobility, which is the possibility of action over distance enabling distance to have meaning in terms of action. The third is possession, which is the product of engaging with space over time, and is an interpretation of affective relationships to the space(s) set up by proximity and mobility. Mobility is important in providing a means of understanding some of the socio-economic assumptions which go towards establishing a spatial paradigm. Using Boltanski & Thévenot's (1991; 1999) model of 'regimes of justification', and the work of Urry (1999; 2000; 2001a; 2001b; 2002) and Adams (1999) on mobility, I argued that some very strong assumptions are embedded in our everyday understandings of mobility.

These understandings are themselves indicative of power-relations which the spatial paradigm helps to reproduce. Specifically, institutional assumptions about individual mobility have tended to ignore issues of, for example, gender, age and ability, although the latter is increasingly a concern under the provisions of the Disability Discrimination Act⁸. Parenting, for example, is a major constraint on mobility which appears to be largely ignored by institutions, yet it has a significant impact on the learning experience for those involved, as the study revealed. The term 'learning environment' has increasingly been used to describe software, such as *WebCT*, which provides access to various content, discussion and assessment resources on-line, and there are few discussions of learning environment from the point of view of embodied spatiality. Notable exceptions are Gordon et al. (2000) and Nesper (1994) and there has been subsequent work which begins to take account of the realities of spatial existence (e.g. Clayton & Forton 2001; Holloway 2001; Clarke et al. 2002). Previous writers have tended to conceptualise this 'environment' as constituted by the interplay of power and identity issues in a 'spaceless' situation.

Possession offered another set of insights into the spatiality of the learning process. By 'possession' I intend to convey a sense of 'being-at-home' in a situation, a sense which can, of course, be a negative one, since spaces can generate a sense of dispossession as well as possession. Frequently, students stated that they felt apprehensive about entering specific spaces such as computer laboratories, because they lacked a familiarity with the equipment which others seemingly possessed. The labs became a site for exchanging knowledge about ICT, but even this apparently beneficial quality of the space had a downside for those students whose time was taken up by requests for assistance from the less-experienced. Possession here was thus a complex interaction between knowledge, communication, altruism and curiosity. There is an existing literature which discusses the professional socialisation of nurses, but this is generally presented as a unidirectional process of assimilation into teams or 'communities of practice' (Lave & Wenger 1991). Possession complicates the idea of a homogenous community, and provides a way of engaging with the positive and negative dynamics of socialisation and community.

What emerges from the current research is that there is a subtle interplay, not only between issues of power and identity, but also between power, identity and physical spatiality. This interplay is not a matter of pure social construction, but social construction grounded in physical embodiment. In the following section I discuss the second and third questions, regarding the role of spatiality in nurse education.

Spatiality in the context of nurse education: How does spatiality affect the lives of nursing students?

It was predicted that nursing students would be good sources of data, for reasons connected with health-care policy and practice. This turned out to be the case, and I am extremely grateful to the participants for providing such rich accounts of their spatial experiences. The complexity of their relationships with spaces, however, is probably not unique. I believe that it would have been equally productive to interview, for example, student teachers, the police, or long-distance lorry drivers. The spatiality of newly-qualified teachers is, in fact, one focus of an on-going study (McNally et al. 2003). It is much harder, in fact, to think of a group whose spatiality would not have been of any interest. The participants had come to nursing with complex 'geo-biographies', and as I argue in Chapter 5 the tendency to ignore embodiment and to focus on 'purely' psychological or social elements of the learning process has detracted from the usefulness of some previous research in the area. Nursing students were a worthwhile group to research, not only because of the richness of the data which they willingly provided, but because of public, professional and political concerns about their recruitment and training.

The study has therefore shown how the use of spatial tools has the potential to address topical issues within nurse education and elsewhere. Recruitment and retention rates for nursing students and qualified nurses are a source of concern within healthcare policy discourse (RCN 2003), and the evidence here is that specific spatial problems can influence morale. These problems include difficulties with placements in relation to domestic circumstances, difficulties in accessing library resources and even the problem of being able to hear lectures properly. The results from this study suggest that there are also interesting connections between travel and learning. The perception of travel as transparent and unproblematic (except under 'breakdown conditions') hides the diverse roles of transport in

⁸ The Disability Discrimination Act 1995 (DDA) is extended to education from September 2002 following amendments introduced by the Special Educational Needs and Disability Act 2001.

providing group study space, space for relaxation, or in facilitating placement opportunities in remote areas. The study shows that spaces open up for learning in unpredictable but creative ways. Public libraries become substitutes for computer labs. A placement becomes an 'adventure'. A car-share is not merely a way of getting from A to B, but affords an opportunity for group learning and the exchange of ideas. In some situations, train travel provides study opportunities, but it is clear from the data that public transport generally was not helpful, and that there was therefore differentiation between car owners and others.

In respect of on-line learning and the use of ICT in nurse education, a spatial approach suggests that on-line activity should be problematised by referring to the material circumstances of learner engagement with ICT. Far from being *de*-spatialised, as suggested by the rhetoric of distance learning enthusiasts, such learning is *re*-spatialised, whether into corners of bedrooms, cramped computer labs or under-funded public libraries. Even the advent of mobile technologies, whilst ostensibly decoupling learners from the need to be co-present in specific spaces, colonises new spaces for learning and thus removes the possibility of creating spaces of resistance to the idea of all-pervasive lifelong learning (Tett 2002). Given that we are in a transitional phase as far as the adoption of ICT is concerned, its spatial effects do not simply take the form of the 'space-time compression' beloved of modernist writers such as Harvey (1989) and Giddens (1991). At the micro-level of student experience, ICT has not yet delivered its potential benefits, because it has been added on to a traditional model of student learning, consisting of lecture-based delivery and essay-based assessment. Indeed, it sometimes adds to the frustrations and workloads of students, by introducing an additional set of skills to be learned, skills which, at least for the students in the current study, are insufficiently supported by institutions. The ability to act at, or over, a distance is frustrated by the location of the technology. Students are often required to be as physically mobile in order to access ICT as they are in accessing other forms of information. Additionally, the knowledge that ICT is 'out there' creates frustration when other delivery systems, such as inter-library loans, fail to meet student expectations. This is a dynamic and evolving situation, and it is likely that current students will be more familiar with the technology and more likely to have personal access to it (*The Independent*, 26/10/03).

There are thus several features of the nurse education process, as it is currently conceived, which have spatial implications. In addition to those mentioned above, these include the geographical location of the relevant institutions, the relation of nursing and midwifery departments to other parts of the HE system, and, most obviously, the practice placement. In addition to these, there are less obvious spatial elements in the assignment-writing process, in the implementation or perception of self-direction and in the way that lectures are conducted. Again, the conclusion which can be drawn from the study is that generalisations about any of these features of nurse education need to be qualified by local knowledge. Even when such knowledge is available, and in certain instances it has been provided by the participants in this study, the implications of taking it into account in determining practice may be considerable. It is clearly difficult, for example, to avoid long journeys to placements when the available settings are as widely dispersed as they are in the Highland situation. A longitudinal study on a larger scale than this one would be required to determine whether the spatial aspects of professional socialisation were significant in terms of, for example, learning outcomes or student retention.

The discovery of complexity in the relationship between nursing students and the spaces in which they learn offers, therefore, useful insights for nurse education. The study is not, however, written from a nursing perspective, and is not primarily about nursing or nurse education. It has thus been able to focus on spatiality and to relate this to wider sociological issues, such as mobility, in a way which might not have been possible within the methodological conventions of nursing research. It has, however, been informed by nursing research which has suggested topics of current concern within the field. Nurse education benefits in that its practices and assumptions have been scrutinised by a 'professional stranger' or 'outsider' (Agar 1996; Merriam et al. 2001). The central conclusion to be drawn is that embodied spatiality matters, and must be taken into account when considering attrition rates, student recruitment and other pressing issues (RCN 2002). It is characteristic of nursing students, both according to the literature and as revealed in their conversations, that they are highly motivated, flexible and reluctant to complain. Research such as this gives them the opportunity to articulate concerns about the process of becoming a nurse which might not otherwise be voiced publicly. It also shows that several of these concerns result from institutional reluctance to acknowledge that spatiality is differentiated, whether for students or for staff. This differentiation is most marked in terms of mobility, and the experience of mobility manifests itself in complex ways, as both a risk and an opportunity. Questions are, therefore, raised by the study which intersect with current policy issues around the spatial and professional expansion of the nursing role. Within this expansion, nursing students are experiencing dislocation, which is 'an unfixed, diverse and contradictory phenomenon' according to Edwards & Usher (2000: 40). They are not simply being asked to work outside the hospital setting, which in any case has never been wholly their 'own' or their sole territory (Rafferty 1996), but are being thrown into '[a] complex future' (UKCC 1999: 18). The following diagram, (figure 8, overleaf), sets out some of the issues:

Figure 8: The complex future of healthcare – the paradoxes

Health care in the future will be characterised by:		
More money	AND	...continuing relative shortage of resources
Central/regional strategy	AND	Growing local diversity of provision and roles
Emphasis on prevention	AND	Great demand for cure and palliation
Continued dominance of hospitals	AND	Considerable emphasis on care close to home
Public reliance on professionalism	AND	Greater lay assertiveness
More, well-educated and assertive patients and clients	AND	Continuing need to serve those with little personal access to information
Greater demand for high tech medicine	AND	Growing demand for complementary approaches
Demand for high technical competence and ‘scientific rationality’	AND	Continuing need for ‘human’ qualities and the time to express them
Blurring of professional boundaries	AND	Separate professional traditions, organisations and public expectations
Greater incidence of the diseases of old age	AND	Continuing demands from younger people
Continuation of old moral certainties		New and challenging environments in which to apply them
The core expectations of nurses and midwives will be little altered	AND	Nurses and midwives are not immune to the other social changes outlined above

(Adapted from Dargie et al. 2000)

An understanding of spatiality can help to unpack some of the contradictions expressed in this table, because spatiality, as a central theme, gathers together a range of material concerns about the future of healthcare which would otherwise be dispersed across a range of discourses and problem areas. The dimension of ‘proximity’ suggests ways in which awareness of new possibilities is spatially mediated, whilst the dimension of ‘mobility’ helps to understand how the ability to deliver or to receive services at a distance might be socially and economically differentiated. Finally, the dimension of ‘possession’, which I have developed here, provides a framework for understanding how the re-siting of nurses and other health care workers can contribute to their sense of autonomy and professional identity. A concrete example of this is the current (2003) controversy over the Edinburgh Royal Infirmary. This institution was recently re-located from central Edinburgh, where it occupied a rambling collection of Victorian and modern buildings, to a ‘purpose-built’ Greenfield site on the outer suburban fringe of the city. Complaints about the new site have ranged from bed shortages and difficulties in navigating around the building, to the expensive and restricted parking arrangements and poor public transport facilities (*Edinburgh Evening News*, 09/12/03). All these are spatial issues, which have apparently been neglected or down-played for a variety of economic and managerial reasons (*Edinburgh Evening News*, 04/12/03). Resources are not, of course, unlimited, but a more spatially-focused approach to user needs might have enabled resolutions of some of the issues at an earlier stage. This is not just about convenient access, but ethical issues have also arisen, such as the proximity of women who have suffered miscarriages to those who have successful births (*Edinburgh Evening News*, 27/10/03), giving rise to considerable distress for those involved. A spatial case study of the project using the PMP framework is, unfortunately, beyond the scope of this thesis, but would produce interesting results.

The above discussion has dealt with the use of the PMP framework as a tool within a particular social science tradition, that of phronetic research as described by Flyvbjerg (2001). It has shown that the study answered its research questions, and it has also shown that what I call ‘spatial neglect’ is an important issue in health care policy and research. In the final section, I draw the discussion to a close.

Concluding the conclusions: as closure beckons, another spatial metaphor appears.

Spatiality is part of human being, and it is important for institutions not to ignore the spatial realities of the student experience. The philosophical grounding of the concept of spatiality is complex, and the discussion of it here is not, and could not have been, exhaustive. The central theme of the whole study is, however, that attention to the specifics of spatiality is worthwhile in terms of understanding important and socially useful areas such as the nursing student experience. In a recent RCN report nurses are compared to an 'amalgam', a connecting substance for a collection of functions (RCN 2003: 15). The experience of nursing students is that they 'amalgamate' a wide range of spatial settings and situations in the course of their studies. The journeys which they make, the knowledge-gathering processes which they use in essay writing, the ways in which they form social groups for study purposes and their engagement with the placements on which they are sent, all contribute to this amalgamation process.

A different process of amalgamation is at work in the production of this text. Here, as will have become apparent, there is an attempt to reconcile two very different approaches to spatiality. The spatiality of theory, whether it is derived from the 'smooth and striated' spaces of Deleuze and Guattari (1988), or the 'non-place' of Augé (1995), or the 'in/different spaces' of Burgin (1996), makes for fascinating reading, but is ultimately as heterotopical and chaotic as Lefebvre's lived-space itself. This is not to say that spatial theories are useless, but rather to say that they are tools amongst others, as is the PMP framework proposed here.

The mental map provided by the empirical research is somewhat different. As with most students, nursing students are in constant motion, but across a very different landscape. There is a terrain of enclosed spaces, of wards, consulting rooms, libraries, cars, kitchens and halls of residence. The journeys between these, in the main are journeys as means to ends rather than objectives in themselves, unlike, perhaps, my excursions into theory. Nevertheless, the use of the PMP framework helps to reveal many of the assumptions which underlie the educational experience of nurses and others. The journey metaphor, which is central to the spatiality of education as currently practiced, is predicated, for the nursing students, on the overcoming of obstacles, in the form of (*inter alia*) difficult placements, crowded libraries and noisy lecture theatres. Yet there are also spatial compensations; the Highland scenery and quality of life, the greenery of the Stirling campus, and the companionship of long drives with colleagues. A one-line summary of the research outcome might therefore be 'spaces are important in nurse education, and everywhere else'. This is, in one sense, obvious, but the evidence points to an increasing disregard of spatial considerations in policy and practice. The controversy currently surrounding the new Edinburgh Royal Infirmary is just one example, but there are many other cases of what I would wish to call 'spatial neglect'. Many of these are linked to issues around mobility and sustainability, issues which will assume steadily greater prominence as climate change begins to be perceived rather than conceived. The outline of nursing student spatiality here provides a sketch map of a relatively small area, but the intention of the study is that it will contribute to a greater understanding of the spatiality of everyday life. This is an understanding which will become increasingly essential, in a future, which is as uncertain for nurse education as it is for the world as a whole.

Taking a wider view of the project, the study of spatiality was itself intertwined with the spatiality of study, a spatiality which was discontinuous, chaotic and yet creative. The postgraduate process is one in which two forms of becoming are potentially combined. The becoming of the research project overlaps the becoming of the researcher in a form of apprenticeship which is both informal and highly significant. Other projects come and go within the long stretch that lies between commencement and completion. These inform the final shape of the main project, sometimes too late to make a difference. The point at which one is best placed to undertake the study is therefore at its end. The conceptualisation of the process as a journey is only partially useful, since there is also an element of dwelling, of haunting a particular set of spaces until possession (perhaps as employment) is gained. The idea of dwelling holds out against closure, which in the case of spatiality is highly appropriate. Spatiality is the basis for both closure and openness, and as such, is an inexhaustible topic. This study cannot claim to provide a definitive analysis of spatiality, but it has attempted to open up the study of spatiality in a useful and timely way.

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