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Undergraduate nursing curriculum building: an exploration into the 'sciences' requirements

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Academic nursing studies programmes are often channelled into one or other existing academic discipline. This limits the development of nursing knowledge which needs to be broader and more varied than a one-discipline orientation. Nursing students' epistemological difficulties arise because of inherent tensions brought about when the paradigms of such disciplines and practice requirements conflict, which so often they do. Interpretive sociological approaches as intellectual orientation for nursing studies offer a way out as their reflective patterns may encourage consciousness development and, through it, point towards changes.

INTRODUCTION

The concern of this paper comprises nursing education within the academic sector. Some problems, however, that are thrown up as a result of a fundamentally fossilized structure found in some universities in relation to a relative academic newcomer such as nursing, are pertinent for nursing education both within and without university boundaries.

Academic nursing, that is, undergraduate nursing education, is often caught between two stools. Each represents a different faculty whose overall aim is that of knowledge construction and dissemination. To that extent, the faculties are similar. However, their dominant methods to achieve these aims may vary widely and may at times exhibit contradictory orientations. This turn of events poses a dilemma for nursing educationists and students who claim a commitment to a perspective which aims at integrating (nursing) theory and practice so that it can be applied to nursing care in the field.

A recent proposal of a London University ad hoc Nursing Advisory Committee deliberating on the future of London University nursing education developments suggest their place to be within a science faculty. At the time, this statement triggered off a somewhat brief and superficial discussion on the merits and demerits respectively of placing nursing education within one or other faculty. While this paper will not settle the question of how much and of which discipline is to go into the melting pot of nursing education, it merely wishes to address itself to the re-opening of a debate which has lapsed momentarily. Once nursing education moves into the university under the sponsorship of one or other faculty as is the habit, its relative fortunes, that is, its intellectual orientation, is sealed. The term 'relative' is used advisedly for changes do, of course, occur. I am, however, concerned here with a dominant ideology which because of its very dominance pervades the structural web of a faculty to an extent that a fundamental orientation is firmly anchored. Changes, if and when they do occur, remain at the level of mere superficiality. A medical faculty will imprint its ideology in one direction, an art faculty in another, while a non-medical science faculty will opt for yet another orientation. On the whole, when nursing education

manages to penetrate the very tightly controlled university structure, where it ends up in terms of its official allegiance much depends on the nature and characteristics of its sponsors. (Future PhD students on the concept of power and adademic nursing education in Britain might profitably explore grounds for having placed early, rudimentary nursing studies programmes within particular streams of academia.)

FRAMEWORK

The following framework has been chosen for consideration to illuminate the problem of curriculum building. As the scope of this paper is limited, each section's function is no more than an attempt at an outline for nursing curriculum consideration. In the process, some of nursing's perennial problems will be explored to ask that they should be made overt and brought already to the conscious attention of the budding nurse: The nature of the great divide (the sciences) and what this might represent; the role and function of nursing under consideration of the gender issue; is the inappropriateness of the medical model given?; is there a solution and what are the implications for whom?

The discussion will not include the methodological problems involved in the emergent eclectic approach to these issues. These would be beyond the scope of this paper.

The great divide and what it represents

This relates to the current practice in British universities to employ a bureaucratic structural division—or is it perhaps a political one?—between the so-called arts and sciences. This development is relatively new, dating back only to the turn of this century when university reform involved changes in then existing structures (Ensor 1936). Superficial observations whereby certain disciplines are subsumed under certain faculties and therefore supposedly denote specific intellectual orientation, obscure the complexities surrounding the grouping of disciplines and their respective separation into different and sometimes opposing camps. (This occurs at times when, for example, science faculties are able to attract funds from industry for research programmes which art faculties have no chance of matching.) The homogeneity of many of the heterogenic disciplines which find themselves grouped in one faculty rather than another owes its raison d'etre to a mode of investigation considered to be scientific and not thought to be practised in the arts faculty. Generally speaking, the divide distinguishes between subjects like chemistry, physics, physiology, pathology and anatomy; in short, the life sciences and metallurgy, engineering, and others, while literature, music, languages, history, economics, psychology and sociology, for example, are subsumed under the arts faculty. The paradox emerges slowly. The arts faculty encapsulates social and behavioural sciences as well as history, not considered a science, and the dilemma is rooted in an ideological battle, the nature of which regards one set of disciplines as scientific while denying that status to others not so defined. The quintessential divide focusses around important methodological debates: the arts faculty claims its scientific orientation to be rooted in a multiplicity of paradigms whereas the science faculty usually operates reigning paradigms which are then deposed when others become sovereign as a result of scientific revolutions (Kuhn 1970). (According to Kuhn, a paradigm comprises a set of theoretical assumptions, laws and techniques for application, which members of a particular scientific community adopt. The notion of 'normal science' encompasses a paradigm which accounts for the behaviour of some relevant aspects of the real world and will change into a new paradigm through the scientific revolution when a crisis has occurred through apparent falsification.)

It seems as if there is something very special about science and its methods for it is held in very high regard. Before the advent of the Briggs' Report (1972), nursing itself had never made a public gesture as to its supposed science orientation. Today, however, a decade and a half later, a 'nursing science' is spoken of or a profession which is science-based or at least science-oriented.

What is this phenomenon called science? A. F. Chalmers (1980) well-versed in the history of science, describes a widely-held commonsense view:

> Scientific knowledge is proven knowledge. Scientific theories are derived in some rigorous way from

> the fact of experience acquired by observation and experiment. Science is based on what we can see and hear and touch, etc. Personal opinion and preferences and speculative imaginings have no place in science. Science is objective. Scientific knowledge is reliable knowledge because it is objectively proven knowledge.

To the initiated this view may represent an exaggerated position and even convey a somewhat naïve assertion, but its very existence points to its persistent strength. The dangers of this simplistic view, well explored and documented by Chalmers and perhaps more pertinent for our consideration also by Reason & Rowan (1981) in their source book on human inquiry, arise because of the mentality exposed in this statement which neither explores the nature of science nor credits it with the underlying factors of personal prejudice, of education, and of one's culture interfering with the recording of objective experiences and observations, thus exploding the pretensions associated with the notion of 'value-free'. A consideration of scientific theories within historical dimensions clearly indicates that the notion of objectivity is infinitely more complex and problematic than Chalmers' previously cited quotation would intimate. Over the years, philosophers of science have pointed to the difficulties associated with proving the truth of scientific theories (Brodbeck 1968).

There are sound historical reasons for the strength of the more simplistic view of science. It can be related to the immensely productive scientific enterprise during the 19th century which, in the case of the medical and biological sciences, according to Shyrock (1957) was responsible for the development of a 'scientific viewpoint and method which guided further progress in the twentieth century'. This is all the more remarkable considering that during the 18th century medicine was seen as a backward science.

For our purpose we need only mention a few cardinal leaps forward which so much shaped our present faith in the orthodox scientific enterprise.

Virchow's studies in the cellular dimensions of disease (Ackerknecht 1953) opened the way for exploring localized pathology and an identification of specific disease. This, in turn, led to an examination of physiological perspectives which incorporated approaches of those of chemistry and of physics. Developments in bacteriology and consequently in safe surgery paved the way for increasing complexities of surgical programmes which could only be accommodated within the rapid building schedules of hospitals of the period.

In summary, then, today's scientific faculties represent the so-called natural and biological sciences which derive their status from 19th and early 20th century success stories in terms of actual developments and in terms of applicability to practice.

An arts faculty represents a far more eclectic enterprise, as there exists no commonly-held view of how to conduct scientific investigation. There are on-going debates whether subjects, for example history or sociology, can call themselves sciences. In Britain, for example, the case of psychology being considered a science has been less problematic than on the European continent, probably because here it can boast of exploiting experimental dimensions. Its scientific claim would be much more suspect were it to involve gestalt or psychoanalytical perspectives. All in all, subjects in an arts faculty are required to fulfil research obligations but their respective scientific modes of enquiry are diverse methodologies existing and created in response to newly-developing demands, orientation and consciousness. A good example of nursing using a different approach to one habitually pursued is Melia's recent (1981) research project which used a qualitative method of investigation to help her understand the underlying processes of what nurses were thinking rather than making inferences from what she might have observed.

As the social sciences are concerned with an understanding of the processes which give rise to specific social behaviour, such knowledge produced by scientific methods is at times too close for comfort to ordinary commonsense knowledge, a feature not totally satisfactory. However, whereas the social sciences have their original source in a commonsense understanding of human interaction, their specific and particular strengths lie in the processes of reflection. They, in turn, help to transform knowledge of the social world by a new conception of it which is then fed back to the 'world' as only 'commonsense'. While this process often receives the facile label of truism, it in fact underscores social

science's strengths of reflection which highlight significances of observation rather than the observation itself. The social sciences were never thought to be sciences in the strict sense, that is, that they employed methods which yielded explanations for objectively-observed phenomena. The objection to the social scientist is based on an assumption that merely observing manifest behaviour will not yield understanding of actions of persons because such actions essentially involved thought and purpose.

Weber (1968) in attempting to tackle this problem, introduced the notion of understanding—'verstehen'—where it is possible to enter the minds of others, that is, the subjective meaning of their behaviour. He suggested that it is a question of interpreting overt behaviour which is based on subjective knowledge, an imaginative projection of one's own state of mind. That there are limits and constraints as to the received truth of verstehen, that it raises complexities at a number of levels, is not in dispute. Weber's idea of verstehen is thought as a supplement to empirical observational methods; verstehen is not to be a replacement. The significance of this knowledge is as a source of hypotheses about occurrences and explanations of human action.

Whereas the nature of the divide between the sciences on the whole presents few problems for ordinary undergraduate students because they make their own choice as to which faculty they wish to join, the discussion so far highlights its problematic nature for nursing students whose paedagogical and theoretical orientation must by necessity be one of integration, that is, to internalize the often contradictory aspects of knowledge and theoretical orientation the genesis of which comes from different faculties.

The role and function of nursing under the consideration of the gender issue

By avoiding a definition of nursing, this merely states that experience and knowledge has convinced me of the futility and emptiness of such a course. Nursing as such is very old, it has undergone changes and it is linked at every point with other social activities. Any attempted definition can only express more or less adequately one of its aspects that it has had at some periods of growth. Since most of those reading this paper are involved at some level with and discussing nursing, they will know what is being talked about. If this is seen as a 'cop-out', so be it.

E. McFarlane's (1980) exposition on nursing theories where she compares four theoretical proposals has helped in my orientation. In acquainting the reader with nursing theoreticians, Imogen King, Dorothea Orem, Martha Rogers and Sister Calista Roy, she identifies similarities in substance, arguing that other differences between the theories are merely one of emphasis and semantics. In accepting her proposition, the difficulties I have had with the theories as they handle concepts of patients self-care, of adaptive mechanisms, of inter-relationships, goals, needs and expectations respectively, are that they are all too encompassing. Anything and everything can be incorporated. Harré (1981) comments on such commonsense concepts by pointing out that they 'help us to discern some textures in social life, but much activity remains mysterious and some goes unnoticed'.

In my thinking about nursing, I was much helped by Strauss who developed the notion of 'sentimental work' as a type of work which requires human response. He and his researchers have categorized this work into seven types of 'interaction work and moral rules', of 'trust and composure work', and of 'awareness of context and of rectification work' (Strauss *et al.* 1981). While there are problems about boundaries between and in between professional and lay groups, and consequent overlapping for the carrying-out of much of 'sentimental' work, for analytical purposes the categories are useful for they provide a guidance for orientation and consciousness development for essential elements of nursing. The researchers' questions focus around how this work is carried out, when and where it is done, who does it, whether and when such work is or is not viable, and what are the consequences of 'sentimental' work for those involved: the staff, the organization, patients and the work itself. Strauss and his researchers claim that if 'sentimental' work is not done, or is seen to be done badly in someone's judgment, then not only the main line of medical work may be affected, but so may interactions, moods, composure and identities.

A lot of nursing reflects Strauss' typology and this is, depending on the circumstances, in

conjunction with or in addition to or instead of the carrying-out of medical orders. Having internalized the conceptual classifications and understood their implications for both patients and nursing staff, demands for nursing educational and training needs should now be able to be worked out. If nurses take their role seriously as that of maintaining a patient's integrity in the face of physical and mental discomfort, abuse and disability, it is as well also to consider Strauss's (1981) work on the 'hospitalized patient'. This work which, according to Strauss, involved the patient's full participation in the treatment and caring programme, fits in well with a nurse's 'sentimental' work as each (the patient and the nurse) contribute to the (nursing) care programme in varying degrees.

A discussion, however brief, on the role and function of nursing needs to take the gender issue as it relates to nursing seriously. This is because the role and function of nursing cannot be separated from those who undertake its activity which in the main is carried out by women. The fact that most nurses are women has implications for nursing work at a variety of levels. Nursing's core focus is the establishment of a relationship, however fleeting, at whatever depth, the nurse–patient, patient–nurse dyad, in the process on the whole of an integration with the execution of medically-derived orders. Because human relationships are a two-way affair, they express a symbiosis of sorts, and in this connection nursing staff's needs and those of patients need to be considered at one and the same time. To that extent, the role and function of nursing is concerned with patient-centredness as well as with nursing personnel's own orientation. The resulting inevitable potential clash of values requires an analysis to the same extent as is taken for granted when teaching or learning about medical or nursing procedures. For practical purposes the bureaucratic nursing structure separates the needs of the staff from the needs of the patient when industrial relations cover staff needs while the director of nursing service focusses on patients needs.

The wish to bring the two together within a basic nursing education programme is to make overt to the nursing student that while traditionally basic nurse training, or, for that matter, undergraduate nursing education is at best patient-centred, it disregards nurses' own needs. A curious development in nursing education is taking place whereby a cardinal sin in nursing activity is seen to be a lack of communication. Consequently, communication exercises and studies up and down the country in the various nursing departments and nursing schools aim at rectifying apparent communication discord. So far so good. Yet the lessons of the history of gender-specific socialization processes, which women and men undergo, are disregarded (Dellamont 1980, Oakley 1981). While some of those characteristics produce manifest contradictions which can be demonstrated to interfere in many a nurse's professional life, men's gender-specific socialization processes lead to financial and status rewards as male nurses come to occupy senior nursing positions out of all proportion to their actual numbers (Nuttall 1983).

Hearn (1982) discusses this development in more detail in a paper where he suggests that, based on Mattinson & Sinclair's (1979) work, distress with clients can be distressing for the worker, so men may not feel too competent to deal with the emotional intractabilities of close contact and move away from emotional work towards administration.

Conflicts of sorts at ward level are often seen as personality incompatibilities and, as such, are often glossed over or accepted as 'this is the way it is'. I am referring to a vast literature about the professional situation of the nurse which by now amounts to an issue catalogue. There are articles on patient-centred nursing, on organizational rationalization processes, on fluctuation rates and others. What so far has not hit the headlines are those series of problems which affect a nurse's interactional behaviour with patients which arise as a result of specific gender socialization processes, which is a case of tunnel-vision. The problems are either ignored, or they have to be worked through in isolation by the individual concerned. While, generally, communication issues are accepted as genuine research concerns, the effect of gender socialization processes in relation to nursing is still awaiting serious research consideration.

Problems related to specific gender socialization processes for women nurses can only briefly be alluded to within the scope of this article. They have their roots in the privacies of people's homes where women are expected to be

available constantly to minister to the emotional and physical needs of their families. Their work is concerned with processes of mediation between the various and varying interests and demands of family members while suppressing the need of self. While this complex and vitiating process requires regenerating opportunities in order to sustain itself, when it is moved into the public arena where similar commitments are required in relation to patient care, a sense of irritable exhaustion is easily discernible. The sick and the ill make constant demands, not to speak of the professional demands which arise as a result of professional parochial interest. Nurses are therefore subject to an enormous amount of psychological pressure which arises out of social situations and which at one level are increased through staff shortages and a hierarchical system which ascribes primacy to a medical model where a nursing model, at best, is only tolerated. At another level, the situation is not helped either by a nursing personnel which accommodates easily and accepts its position of subordination, both ingredients of a previous specific gender socialization (Baker Miller 1976).

Is the inappropriateness of a medical model given?

In the latter part of the 20th century when people have become science- and technology-weary and medicine is undergoing a period of critical assessment as to its results and promises, nursing has declared itself on the side of the angels with its consideration of the personality of the patient as paramount to the disease process which, after all, is a prerequisite of ethical care. Nursing has, at least officially, shed the medical model and taken on board a nursing model which, for reasons of brevity and for the purposes of this paper, emphasizes a holistic approach (McFarlane 1980) as opposed to one of fragmentation necessitated by localized pathology. Apart from an admonition to use a holistic approach in patient-centred nursing, we have not yet worked out in detail how we might do this. True, we have patient-care plans. But what they do generally is to abide by a medical diagnosis and as the resultant medical regime is followed, so are traced the influences of social factors (Berger & Berger 1976) on the occurrences and the responses to illness. While this approach indicates something about the social and medical aspects of disease, it does this merely at a level of superficiality, and in no way explores the nature of the tension between disease and being ill. Strauss's work, discussed previously (Strauss *et al.* 1982), provides indicators of how illness and medicine mediate social relations in a fundamental sense and an holistic approach demonstrates the complicated nature of the role of medicine; how it exercises control over a patient's body and a patient's being and how simultaneously it disrupts a person's life as the result of the interrelation of the physical, the functional and the socio-emotional.

But medical knowledge is limited to the extent that it does not include illness experiences from those with whom it relates and, further, it only offers partial explanations of what goes on. Diseases are seen as abstractions because they treat disorders as if they existed outside the social conditions which influence their incidence. Disease is seen as a disturbance of the 'normal' function of the body (organ) whereby the notion of 'normal' begs the question. Illness, on the other hand, is an expression of the ranges of an individual's vulnerability complex, the indices of which are many and varied within the same and between different persons. While it reflects the subjective response of the person being ill, it exposes the strategies which that person employs to overcome, to withstand, or to succumb in the face of disturbances of a being's social functions. Illness experience encompasses the concrete situation in which patients find themselves.

A research project (Fitzpatrick *et al.* 1983) on the social dimensions of healing which contains a wide-ranging and well-discussed section on the mediation processes between healing and the cultural contexture of patients, pinpoints research methodologies which seek to concentrate at one and the same time on patient satisfaction, on treatment received and on subsequent outcomes. This relates to their immediate and more distant environment, to the place of work and of leisure, to the family; in short, to the mobilizing of social copying mechanisms, the ingenuity of which is often left to a patient's own resources. Being ill rather than having a disease is a

question of existentialism in the sense that man and woman is not part of an ordered metaphysical scheme but that individuals must create their own being, each in his or her own specific situation and environment. Being sick is never a static state; it is merely a description of the moment, a process with tendencies for improvements, regressions or remissions, which vary according to individual capabilities and social situations. Factors such as age, sex, and membership of social class and ethnic groups provide not only variant interpretations of meanings of disability, they also allow for wide differences in illness behaviour for a particular group of patients who are afflicted by the same disease syndrome.

While the medical model currently in use does not take these factors into account for consideration of medical therapy, the nursing model's holistic value recognizes exogenic social dimensions which enter the consideration for appropriate patient therapy. A sentimental comprehensive notion of holism, however, tends to obstruct a patient's distinctiveness which requires to be recognized as nursing approaches its highly individualistic activity called upon by the nature of the exercise. A holistic model can be and often is as mechanistic as a medical model. Has the time perhaps come when the pendulum is allowed to swing back and where, instead of supplanting one model with another, the existence of a dual relationship between that of the physical and that of the psycho-social is accepted as the reality instead.

A solution?

I have tried to discuss the different, almost opposing scientific orientation contained and displayed within academic faculties. I have tried to outline some aspects of nursing work which include considerations of nurses themselves, particularly as gender beings, and I have alluded to the difficulties of working within specific models of medical and nursing care. My aim was to illustrate some of the nature of the knowledge which nurses might wish to have in order to understand 'where they are at' and why, and to develop a perspective for their work.

As a professional service, nursing's scientific legitimacy becomes explicit when nursing and other knowledge is used to guide and enhance practice. The primary guiding force of the scientific inquiry in nursing must be the nature of the phenomenon rather than an idealization of a specific technique when the crucial question is whether a specific technique of inquiry actually illuminates the phenomenon of interest. In this connection I am indebted to the visionary outlook of Helen Colloway (1981) who, in her article 'Women's perspectives: research as re-vision', discusses the notion of re-vision when investigating woman's issues. She suggests asking new questions as increasing consciousness in relation to women forces issues which, though they had been there all along, had not surfaced. The notion of re-vision should likewise be applied to nursing by looking afresh at its material.

Another aspect of the tension already demonstrated between the two models of science are the professional demands, rooted in patterns of professional practice. When involved in practice, the profession demands a level of certainty in terms of knowing the correct type of nursing care given a set of circumstances. State registered nursing examinations provide no leeway for debate of issues involved. Answers given have to have a strong urge to certainty. However, analytical training requires the nurturing of a speculative mind which by definition can never adhere to the certainty of absolute correctness. Within nursing education, space must be found to accommodate the myth of certainty. The key issue for the practising nurse is the relationship between what is considered theory and what practice. This is built on an assumption that theories are divorced from social activity in that they may not be subject to practical verification. However, because theorizing like any other social activity is likewise one, theories are ultimately about value judgements, about phenomena to be explained.

The theory/practice debate is highly problematical because it rests on an assumption that rationality as the key factor is the generation of practice-centred knowledge, and that changes in nursing education alone will bring about the much desired integration. This does not take into consideration the power of the hospital ward as the determining learning environment, as the social context in which nursing students are likely to develop their own theories from observation of ward practice. It is all a question

of what happens on the ward and to what extent experiential knowledge that learners internalize is based on stereotype approaches to care. Notwithstanding the wishful employment of a nursing process model, the importance of a diagnostic approach which is widely diffused throughout hospitals imprints its primacy on nurses' consciousness.

Nursing within the university is an ambitious undertaking because it is not discipline-based but spans different faculties by partially reworking and partially integrating material from a range of disciplines in the light of nursing perspectives and analyses. These include those of a wide variety of social (and this includes medical) and historical processes, of structure and events, so students can ask a variety of questions. They relate to aspects of the biochemical and the biological, to questions of objectivity versus subjectivity, to the meaning of the social, and they relate to their gender positions within the society and the likely effect these may have on the various roles that they play.

The social sciences offer interpretive approaches which are highly suitable for an examination of controversial issues, and in the manner that they draw attention to the ranges of issues which require debate. A theoretically informed nursing practice which merely incorporates theories drawn from biological and social sciences is guilty of taking a superficial approach. Theory can be crucial for practice when it challenges everyday assumptions about nursing and nurses which do require the intervention of consciousness. By highlighting some of the concerns of nursing itself, an intellectual orientation needs to be built into the curriculum which relates nursing practice to wider social issues. The demands of nursing make it imperative that the compartmentalization of knowledge into disciplines is broken down as is the divorce of the personal experience from a reliance on ostensible objectivity. Rather than nursing accommodating the university patterns of organization, it may have to be nursing itself which triggers off a reform which reorganizes a social space where nursing knowledge has a chance to develop. rather than being put into the straight-jacket of a one-dimensional faculty.

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