

1: Ethics, practice, selection and training.

"every consultation has an ethical component"
Bradley (1983).

"To decide what type of treatment to prescribe a physician must weight factors of different types: in particular, facts and values."
Hill (1979; p.254)

"...it is crucial to any understanding of clinical judgement to see it as involving an ethical dimension"
Scriven (1979; p.14)

"Medical education today places too little emphasis on the ethical aspects of medicine..."
McIntyre and Popper (1983; p.1922)

"In practising medicine doctors routinely make decisions... Some, but only some, of these decisions are matters of technical skill. I submit that the majority of decisions taken by doctors are not technical. They are, instead, moral and ethical."
Kennedy (1981; pp76 and 78).

The choice of what action to recommend involves more questions of value ... than diagnosis. The closer we come to the end of the process of clinical judgement - the right action - the less useful and available is the scientific model. ... The reasoning at this stage is mainly dialectical, ethical and rhetorical."
Pellegrino (1979a; pp. 179 and 181).

Summary.

An overview of the thesis is presented, discussing the role of ethical attitudes in determining medical practice. A brief account of the three empirical studies is also given.

The practice of medicine involves a continual stream of decisions; some trivial, others literally vital; some technical, others ethical. It is ethical decisions which form the broad canvas of this thesis, ethics being taken in the widest sense as concerned with problems of assessing 'right action' for which purely technical answers are either not in principle possible, or perhaps are simply not technically possible at present; in either case decisions still have to be made, even if the result is only an act of omission rather than commission by simply deciding either not to act or not to make an explicit decision. As Sartre has put it, "He who decides not to decide has in fact decided" (Goldenring, 1983). Such ethical decisions are important in medicine, are liable to become ever more important as technical advances occur (as for instance has been shown in the field of in vitro fertilisation), and are liable to become of increasing interest and concern to the public at large, and to governments (as evidenced by the creation of such groups as the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research (Abram and Wolf, 1984), and the Warnock Committee (Anon, 1984a)). Furthermore the problems will be accentuated rather than diminished by the use of statistical decision analysis (see Brett, 1981), and are generally completely ignored by studies of 'clinical problem solving' (e.g. Kassirer and Gorry, 1978; Elstein, 1976; Elstein et al, 1978). The manner in which ethical decisions are made by doctors is also of growing interest to the ever-increasing group of professional 'doctor-watchers' (Jonsen, 1983).

That doctors disagree as to how ethical decisions should be made is a trivial observation (although the eloquent paper of Hilfiker, 1983, and its associated correspondence will provide an example, should it be

needed). How to explain and understand those disagreements is a far more complex problem; and melding the multitudinous attitudes and positions into a single coherent and generally acceptable set of professional policies is almost impossible, as is well illustrated by the almost totally bland nature of such works as the British Medical Association's Handbook of Medical Ethics (British Medical Association, 1980).

The present thesis has two themes, which are well reflected in the title of a paper by Alison Munro, once a head-mistress and then Chairman of a London Teaching Area Health Authority, in which she asks, "The wrong doctors: selection or training at fault?" (Munro, 1981). By "wrong" it is taken to mean the same as Jason (1978) when he said, "There is considerable dispute [whether] ... the capacity for self-initiated, independent learning [,]... effectiveness in establishing trust-based, empathic relationships [,]... and the ability to identify and solve complex clinical problems ... are present among current physicians to the extent that society deserves"; and it is assumed that these deficits are, in part, attitudinal, although technical incompetence and simple ignorance may also contribute. The two parts of Munro's question suggest that such problems arise either because the wrong students were selected in the first place (i.e. that attitudes are brought with the student when he arrives at the school), or are the direct consequence of medical training (i.e. the attitudes are bought at the school). The two positions may be likened to the nature-nurture controversy which has riven so much of biology, nurture in this case being seen as commencing at the age of admission to medical school. Part I of this thesis examines in detail the generally neglected question of how medical students are selected. As well as considering the specific question of whether acceptances differ from rejects in the ethical attitudes that they hold, the study also considers the questions of whether there are

factors in selection such as social class, schooling, etc., which have an indirect influence on the attitudes of students, and it places these questions in the broader context of asking how the process of selection occurs; Who applies for medical school; How are they short-listed for interview; How are they selected at interview; Is the process generally fair; and, finally, How can the process of selection be improved? Unless the process of selection itself is well understood then conclusions to its effects cannot be drawn. Munro is not unique in suggesting the need for change in selection, in its relation to attitudes, although Ewan and Bennet (1981) have disputed that position. In an influential review, Rezler (1974; p.1029) concluded that,

"attitudes are indeed highly resistant to change ... [H]ow can medical schools ever hope to develop new professional attitudes? The answer lies in selecting students who possess certain attitudes prior to entrance, attitudes that the medical profession considers important, instead of trying to develop such attitudes in students after they enter medical school"

and her conclusions were later echoed by a Lancet editorial (Anon, 1975).

Likewise, an editorial in Medical Education concluded that;

"Not all the qualities needed by doctors can be instilled by medical training; and some of those necessary attributes, particularly attitudes and values, will be more or less evident when appropriate scrutiny is made with technically sound selection methods" (Anon, 1979a, p.78)

Empirical support for that position is provided by Shuval (1980; p.115) who found that post-intern attitudes were about as well predicted by pre-entry attitudes as by pre-intern attitudes, suggesting relatively little overall change during the clinical years, although Shuval herself does not agree with that interpretation (p.217).

Part II of the thesis considers how students change as they pass through medical school. Once again the theme uniting these studies is the understanding of how ethical attitudes develop and change, but necessarily other issues arise in answering these questions. How much

can change be attributed to medical schooling per se, and how much to the concomitant ageing and maturation of students as they pass through medical school? Finally, do factors such as the religious views and the cultural interests of students affect their attitudes, both factors traditionally being linked to ethical attitudes through causal mechanisms in a number of ways. In particular, if there are correlates between, say, religion and attitudes, what is the direction of causation? Do changes in religious views cause subsequent changes in ethical attitudes, or is it rather that changes in ethical attitudes cause subsequent change in religious views? The method of cross-lagged panel correlations will be used to provide answers to such questions. Chapter 13 is the focal point of Part II, and the other chapters may be seen as converging on the issues raised in that chapter, providing the necessary tools and background analyses. The reader may do well to start Part II by reading chapter 13, then reading chapters 8 to 12, and then finally re-reading chapter 13.

Together it is hoped that Parts I and II, as well as providing what Kemp (1968) has called an "ecology of medical students", will begin to answer the questions raised by Munro (1981), in so far as they account for the differences in attitudes found between medical students. Two further assumptions will be necessary before differences between doctors can be explained. Firstly it must be shown that the attitudes of students correlate with the subsequent attitudes and behaviour of those students a number of years later when they become mature, practising doctors. There are, to my knowledge, simply no empirical prospective studies to justify that assumption, and at present it must simply be taken as a reasonable article of faith which would seem to be well-supported by informal observation. The second assumption which must be supported is that the ethical attitudes of doctors actually matter,

and have a genuine effect in determining their practice, and the decisions they make in that practice. Such an assumption seems implicit in the continuing publication of studies on the attitudes of doctors and other personnel in the health professions. Table 1.1 lists the number of English-language references in Index Medicus under the heading 'Attitude of Health Personnel', over the 10-year period, 1974 - 1983. An average of 171 papers per year suggests that such attitudes are strongly felt to be relevant and important, at least by the researchers themselves. Similarly the continuing publishing success of the Journal of Medical Ethics emphasises the concern felt by doctors over ethical problems. And outside of medicine itself, there is a ready assumption of the relevance of attitudes to practice, reflected in the popular media (e.g. Gathorne-Hardy, 1984), in medical sociology (e.g Carlton, 1978; Bennett, 1979, p.175; Hauser, 1981, p.121), and in academic philosophy, which has seen a renaissance of interest in ethics in relation to medical problems (e.g. Bloch and Chodoff, 1981; Bok, 1978; Frey, 1983; Glover, 1977; Nagel, 1979; and Singer 1979).

A number of more concrete examples will help to emphasise the role of ethical attitudes in medical practice. A recent example concerns selection of patients in end-stage renal failure for dialysis and transplantation. The United Kingdom has one of the lowest rates of dialysis and transplantation in Europe. Analysis of the attitudes of nephrologists, general physicians, and general practitioners to active treatment in a series of hypothetical patients shows that many patients are not treated despite being acceptable to nephrologists, because GPs and physicians will not refer them. This 'negative selection' depends primarily on criteria of who 'should' be treated, rather than who 'could' be treated (Challah et al, 1984). Such decisions are almost entirely ethical rather than technical, and involve assessments of the worth of

life, the worth of an individual, and the global cost of treatment to society, all of which are not primarily medical judgments; they are ethical.

Mechanic (1979; p.185) has suggested that "...physicians' political views are highly correlated with how they view the organisation and delivery of medical care", and as an example he quotes, amongst others, his own study of general practitioners (Mechanic, 1975). The attitudes and values of 772 GPs in England and Wales were assessed in relation to their 'social orientation', those with a high social orientation feeling that medicine should involve itself in a wide-range of everyday problems of patients. Doctors were also categorised in terms of their scientific orientation, by analysing their use of 19 diagnostic procedures over a two-week period. The combination of scientific orientation and attitudes related to a wide-range of other measures of the manner of practice of the doctors. Mechanic (1974) also found that the receptivity of American primary-care physicians to organisational change in their practices related to their political attitudes. A similar result was found by Goldman (1974), although Toone et al (1979) could find no relation between political attitudes and psychiatrists' models of mental illness.

A British Medical Journal editorial reviewed the work of Pallis and Stoffelmayer (1973), which showed correlations between the political and social attitudes of psychiatrists and their preference for physical treatments, and concluded that "...psychiatrists should be aware of associations between their social attitudes and the treatments they use. Disagreements ... between psychiatrists about efficacy of various forms of treatment are not based on reason alone. They stem in part at least from deeper roots. Might not inquiries of this kind describe [similar effects] among surgeons, or among general practitioners ...?" (Anon,

1973).

A study in which attitudinal effects are implicit but not explicitly studied, is that of Howie (1976). 593 general practitioners returned a questionnaire in which they were given a brief case history and a photograph of a sore-throat, and asked whether they would prescribe antibiotics. In 7 of the 12 cases the decision was dependent on the social circumstances of the case (the photographs being constant). For instance 16% of the GPs would administer an antibiotic to the "Son (aged 12) of the newly appointed district medical officer" whereas 24% would give an antibiotic to the "Son (aged 12) of the newly appointed hospital consultant surgeon" (difference $p < .05$). Clearly therapy here is dependent upon social attitudes. Another example of implicit attitudes affecting treatment is the study of Bedell and Delbanco (1984) of cardio-pulmonary resuscitation (CPR) in an American hospital; "our study suggests that physicians frequently form opinions about a patient's attitude toward CPR ... These attitudes and behaviours appear to be independent of the physician's estimates of the probability of arrest, the location of the patient in the hospital, or the patient's underlying disease" (p.1091). The attitudes are clearly shown to affect what the patient is told, and often conflicted with the patient's own wishes concerning CPR. The determinants of these attitudes, which to large extent are ethical, are not clear.

Another study in which attitudes are important is in the success of the consultation as a form of communication; as Walton et al (1978) put it, "The doctor's attitude ... is one factor that has been clearly shown to affect compliance and understanding" (p.27). Rezler and Haken (1984) suggested that "lack of access to doctors, hurried visits, inadequate information, missed psycho-social problems, and the high cost of medical

care are frequent complaints voiced by patients [which] ... have their roots in the doctor's attitudes." (p.331).

One of the earliest and most cited quantitative studies of the ethical attitudes of doctors is that of Oken (1966), who asked 219 physicians in a Chicago teaching hospital whether they would tell a patient that they had cancer; some 88% said that they would not. Quite clearly the attitude here must influence practice itself. The doctors' attitudes have been contrasted with those of patients, Weir (1979) placing the Oken paper alongside the survey of Kelly and Friesen (1950), in which it was shown that about 90% of patients, both those with and without cancer, would want to be told the nature of their disease. (in fairness it must be said that the attitudes of both oncologists and doctors in general have now changed substantially, a vast majority being in favour of telling the diagnosis; Greenwald and Nevitt, 1982; Novack et al, 1979). Oken (1966) concluded his influential paper by stating that, "our personalities, feelings and attitudes play a major role in determining the manner in which we communicate with and treat patients".

Hoffman (1958) reported an unusual and important survey which examined 89 American general practitioners to assess their ability as doctors, simply entitling the paper, "How do good doctors get that way?". The important negative results were that quality of care did not relate to background factors such as father's occupation, score on the MCAT (Medical College Admission Test), patient load, etc.. Instead the best correlates were variables which were far more under the active cognitive control of the physicians: the amount of post-graduate study; subscription to medical journals; membership of the American Academy of General Practice; having a well-equipped office, and having an appointments system. The implication is that those variables which

probably best reflect the attitudes of the doctors to their practice are also the best predictors of their ability in that practice. The same finding is reported in the unusual study of Coleman et al (1966) in which they observed the response of a group of doctors to the introduction of a new drug, given the pseudonym 'gammanym'. They found a number of correlates of rapid use of the new drug in practice, and they state:

"The factors examined up to this point have been external characteristics of the data: speciality, background, attendance at meetings, readership of journals, and so on. But implicit in many of these external characteristics are internal attributes: certain orientations to medicine, and indeed to life generally" (p.183, my emphasis).

Once more the implication is that attitudes in the broadest sense are important in determining the details of practice.

An unusually sophisticated study of attitudes is that of Link et al (1982). They investigated the attitudes of Israeli GPs towards psychiatry, finding four independent attitudinal dimensions; I: Belief in Psychogenesis, II: Psychiatric Fatalism, III: Referral reluctance, and IV: GP as caregiver. When they examined the behaviour of the GPs in their practice they found that factors I and III predicted the likelihood of GPs identifying patients as possible psychiatric cases, but did not relate to the probability of a case being referred to a consultant psychiatrist, once the case had been identified by the GP. The effects of the attitudes are therefore clearly demarcated and circumscribed, suggesting that they might not have the universal import suggested by some authorities.

Despite the suggestions of the above studies that attitudes are important in determining practice, it must be said that there is an embarrassing dearth of studies in general which examine causes of variation between doctors in the way in which they practice. In the sociological literature the tendency is to examine a merely stereotyped

figure, 'the doctor', with little emphasis on differences, many of the studies being observational and qualitative rather than quantitative and assessing hypotheses (e.g. Rosser and Maguire, 1982). In the medical literature it has come to be accepted that doctors indeed differ in ability, or in personality, and in their practice (e.g. Marks and Hillier, 1983 as a single random example), but this is usually just accepted as a fact of nature, with no attempt being made to explain or understand such variation in relation to differences between the doctors themselves e.g. in studying their communicative abilities (Byrne and Long, 1976). Even if attempts are made they are usually in terms of what Coleman et al would call 'external characteristics', rather than of the internal characteristics which reflect the personality of the doctors concerned. A good example of this is the much-praised studies of British general practitioners by Ann Cartwright (Cartwright, 1967; Cartwright and Anderson, 1981). Each study contains a chapter on "Variations between doctors", and in each case is almost totally concerned with differences in external characteristics; age, sex, etc.. In the present thesis I would argue that it is prima facie highly likely that differences in personality and attitudes of doctors are of interest and importance, and that such differences should be investigated, if for nothing else but to show the negative result that they are actually not of the importance that common-sense and intuition would suggest them to be.

The empirical studies.

The data for the present thesis are derived from three separate empirical studies, two of which, the Birmingham Study and the St. Mary's Study, will be analysed in some detail, and the third, the Cambridge Study will be used only to provide extra subjects for the factor analytic

sections of chapters 8 and 10. The St. Mary's study alone is used to investigate the process of student selection, while both the St. Mary's and Birmingham studies are used to study attitude change during the period at medical school, the Birmingham study being used to study attitudes in all years at medical school, both transversely and longitudinally, and the St. Mary's study being used to assess the importance of background factors.

For convenience a brief account of the structure of the three studies will be given here, and the full versions of the questionnaires may be found in appendices to this chapter. The St. Mary's study will necessarily be described in far greater detail in chapter 2.

The St. Mary's Study. All persons were studied who applied through UCCA (the Universities' Central Council on Admissions) during September to December 1980 for admission to St. Mary's Hospital Medical School in October 1981. Those with non-British addresses for correspondence were omitted from the study proper on the grounds of logistic convenience, although their final destinations were observed. All those in the full study (i.e. with British addresses) were sent questionnaire Q1 (see appendix 1-1) by post as soon as possible after receipt of the UCCA form, and were asked to return it in a stamped addressed envelope that was provided. All applicants who presented for interview were asked to complete a second questionnaire, Q2 (see appendix 1-2), on their arrival at St. Mary's for interview. The Dean completed a proforma on each application at the time of reading the UCCA form (see appendix 1-3), and each interviewer also completed a proforma on each interviewee (see appendix 1-4). The author examined all UCCA forms to extract statistical information, and UCCA provided information on the final destination of each applicant in October 1981. The A-level examining boards provided

information on A-levels obtained by applicants subsequent to their application to UCCA.

The Birmingham Study. This was carried out during the period October 1977 to October 1981 at the Medical School of the University of Birmingham, and was the successor to a preliminary study carried out there during February 1974. A single questionnaire was used (see appendix 1-5), which was distributed in individually addressed envelopes to all 1st, 2nd, 3rd, 4th and 5th year medical students on the first day of term in October 1977. Subsequently the same questionnaire was distributed to all new 1st year entrants to the medical school in October 1978, 1979 and 1980. In October 1981 the questionnaire was once more distributed to students in all five years of the medical school, including the new intake of that year. Figure 1-1 summarises the structure of the study in relation to the year of study in the medical school, the calendar year, and the cohort of entry of students to the medical school. The mean response rate in the thirteen 'year-groups' tested was 48.4% (SD 13.7%) with a range of 70.0% to 26.9%, the latter value coming from one of the final year groups, who are the most difficult to contact. In general response rates were highest in the five first-year groups (mean = 61.9%; SD = 7.5%). Several points must be emphasised about the design: i. There are two transverse studies, one in 1977 and one in 1981, and hence cohort effects may be distinguished from year of study effects. ii. The study is partly longitudinal in that those in the 1981 transverse study were also studied as new entrants over the period 1977 to 1980, some one to four years earlier. The design therefore allows both cohort and year of study effects to be distinguished, and also, since it is partly longitudinal, allows causal influences to be determined by examining the same individuals at

different times.

The Cambridge Study. This study examined a group of freshman medical students reading medicine at the University of Cambridge in October 1977. No follow-up of these students has been attempted. The questionnaire used was almost identical to that of the Birmingham study, except where minor changes were made on the first two pages to take account of local differences from Birmingham. The questionnaire may be found in appendix 1-6.

Figure 1-1. Shows the structure of the Birmingham study of medical student attitudes. The abscissa shows calendar years, and the ordinate shows years in the medical school. Single cohorts are represented by oblique lines, and the groups actually studied are shown as large solid points and lines. The large squares indicate the 1977 transverse study, the large triangles the 1981 transverse study, and the large circles the entrants during 1978-1980.

The Birmingham Study 1977-81

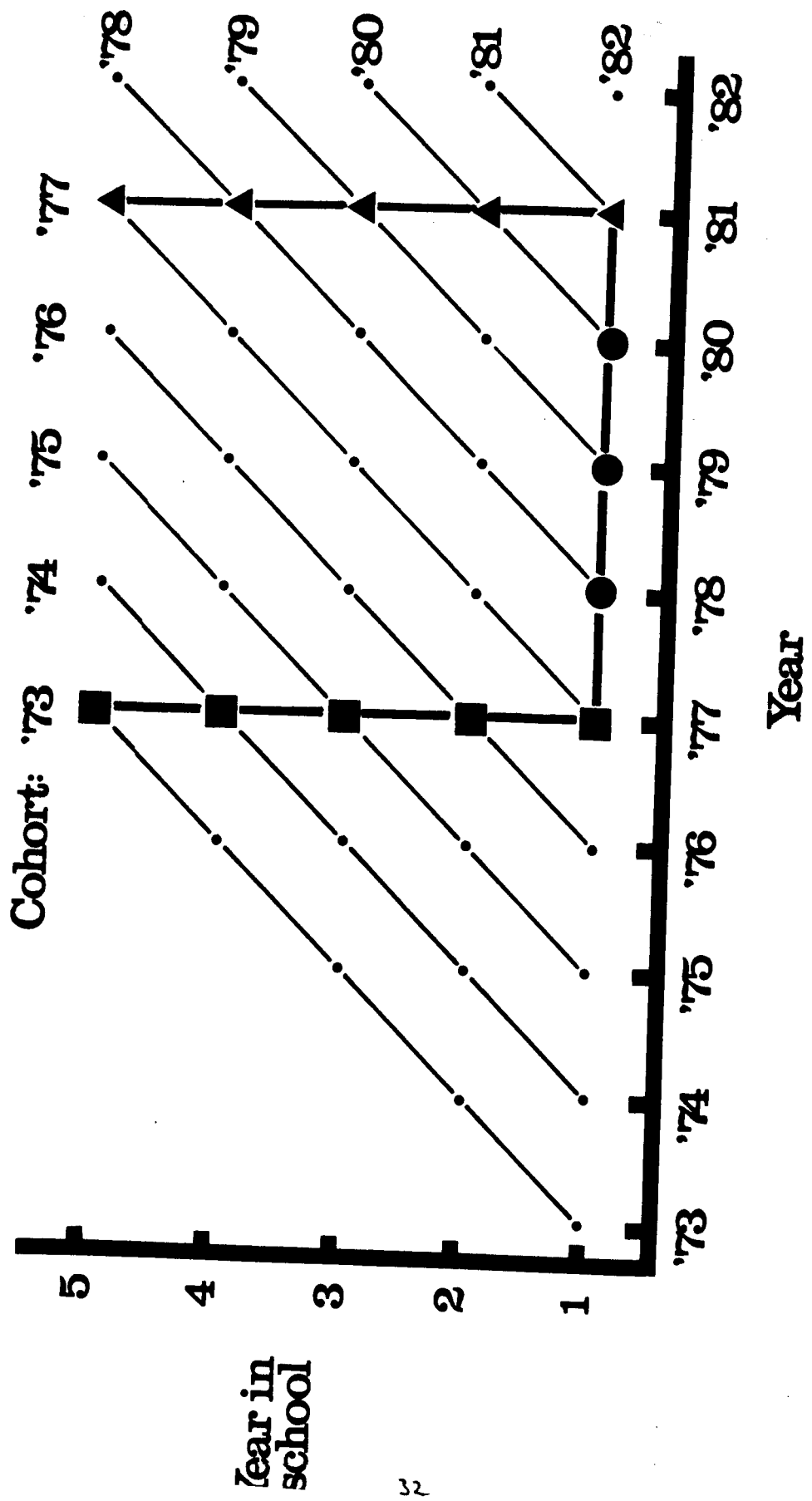


Table 1-1: Yearly references to 'Attitudes of Health Personnel' in Index Medicus for the years 1974 - 1983 (English language only).

Year	References.
1974	144
1975	201
1976	176
1977	207
1978	168
1979	176
1980	145
1981	169
1982	138
1983	188
Total	1712

Appendix 1-1.

St. Mary's study: Questionnaire 1.

St Mary's Hospital Medical School

Norfolk Place London W2 1PG 01-723 1252

Dean: Professor Peter Richards,
MA, MD, PhD, FRCP.

Secretary: K. Lockyer, BA.



Dear Applicant,

We have recently received notice from UCCA that you have placed St. Mary's Hospital Medical School on your UCCA application form. That application is being considered at present, and you will hear further about it either from the Dean, or from UCCA.

At St. Mary's we are interested in who is applying to study medicine and in how our selection process works. We are therefore carrying out a research project and would be grateful if you would help us in this by completing and returning the enclosed questionnaire. This questionnaire is entirely for the purposes of research, and its contents will not be known to those who are actually carrying out the selection of students. Please therefore answer as truthfully as possible in the knowledge that none of the information given will affect the selection process at all. Naturally all information given will be treated in the strictest of confidence and will be used for educational research only.

This research project was instigated by the Dean of St. Mary's and has his complete approval; however, none of the information will be made available to him until the selection process is completely finished, and then only for the purposes of research. I should also add that I myself am not involved at all in the selection of medical students.

Since this questionnaire is not a part of the official selection process its completion is not a necessary part of your application, and if you are opposed to completing it, this is a matter for you. Alternatively, if you do not wish to answer certain questions, please leave them blank and return the rest of the questionnaire. Since the study does have the approval of the Medical School I would however be most grateful if you could take the trouble to complete and return the questionnaire as soon as possible, in the enclosed stamped addressed envelope.

My thanks in advance for your cooperation.

I.C. McManus, MA, MB, ChB, PhD.
Lecturer in Psychology as Applied to Medicine

812070

Please Leave Blank

St. Mary's Hospital Medical School

Research questionnaire for applicants for admission

8				
			0	2

1. Date of Birth ___ / ___ / 19 ___ 2. Date of Birth ___ / ___ / 19 ___

				8
				8

Full name of candidate (Block Capitals)

Home Address _____

Country of Citizenship _____

Sex (Please ring the appropriate reply) Male/Female

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Marital Status (tick the appropriate category)

- Single (not engaged to be married within the next twelve months) _____
- Single (engaged and contemplating marriage within the next twelve months) _____
- Married without children _____
- Married with children (If so, how many?) _____
- Divorced _____
- Widowed _____

	25
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For residents of the U.K. only:

In which county or borough is your permanent home? _____

	27
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Which of the following have you spent at least half of your life so far? Tick the appropriate category)

- Isolated rural area/s _____
- Village/s _____
- Small town/s (pop. under 50,000) _____
- Large town/s (pop. 50,000 - 250,000) _____
- Cities/Conurbations (pop. 250,000 and over) _____

	28
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If you have not yet left school:-

When do you intend to leave school? _____ month _____ year

				31
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If you have left school:-

When did you leave school? _____ month _____ year

				36
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Which of the following types of school have you received your secondary education? Please tick the appropriate one. If you have been in more than one type please indicate the number of years in each.

- Comprehensive _____
- Grammar School _____
- Grant-aided School _____
- Independent Public School _____
- Private School _____
- Secondary Modern School _____
- Sixth Form College _____

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During your secondary education did you spend one or more years as a boarder? Tick yes or no)

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If you have taken, or are going to take, British 'A' level examinations please give the subjects, board, date taken (or to be taken), and grades obtained. If you have not yet taken an A-level grade please indicate the grade that you hope to obtain. If you are taking resits, please indicate both grade obtained, and grade expected to obtain.

Please Leave Blank

	<u>Subject</u>	<u>Board</u>	<u>Date</u>	<u>Grade obtained</u>	<u>Grade expect to obtain</u>
1.					
2.					
3.					
4.					
5.					

Have you already obtained a University degree in any subject? No/Yes
If Yes, what division honours did you obtain?

First / Upper Second / Lower Second / Third / Pass

What degree and subject? _____

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Do you already have some professional qualification, other than a university degree? No/Yes

If yes, what qualification? _____

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Whether or not you have left school:-

17. When do you intend to enter university? _____ month _____ year

18. Do you intend or are you having a "year" off between school and University? No/Yes

19. Would you recommend to others that they should have a year or so off between school and university?

Definitely No / Probably No / Probably Yes / Definitely Yes

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Have you applied to UCCA before? No/Yes

If yes, please give details.

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What is or was your father's occupation?

(Describe what he does or did as fully as you can) _____

The following are The Registrar-General's Occupational Groups. Classify your father's occupation as precisely as you can into one of these groups (tick the appropriate category)

- a) Socio-economic Group I: Professional, etc. Occupations, e.g. University teachers, higher executives, company directors, lawyers, etc. _____
- b) Socio-economic Group II: Intermediate occupations e.g. teachers, journalists, authors, civil service administrative officers, pilots, managers, technicians, musicians, etc. _____
- c) Socio-economic Group III: Skilled occupations, e.g. accounting and costing clerks, craftsmen, foremen, shopkeepers, mine-workers, and other skilled workmen, etc. _____
- d) Socio-economic Group IV: Semi-skilled occupations, e.g. postmen and telephone operators, agricultural workers, etc. _____
- e) Socio-economic Group V: Unskilled occupations, e.g. building and dock labourers, etc. _____
- f) Armed forces _____
- g) Cannot classify _____

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Do you think that medical schools automatically reject candidates who put them in fourth or fifth place?

All of them / Most of them / A few of them / None of them

How many of the medical schools that you have chosen have you actually visited? 0 1 2 3 4 5

How many of your chosen medical schools are on your list because of:

- i. recommendations from students there at present? 0 1 2 3 4 5
- ii. recommendations from your school? 0 1 2 3 4 5
- iii. recommendations from doctors who trained there? 0 1 2 3 4 5
- iv. their nearness to your parental home? 0 1 2 3 4 5
- v. their farness from your parental home? 0 1 2 3 4 5
- vi. their prospectus? 0 1 2 3 4 5

How important to you in choosing to apply to St. Mary's was the medical school prospectus?

Very important / Fairly important / Slight importance / Unimportant

Would you like to be able to live at home whilst carrying out your re-clinical training?

Definitely Yes / Probably Yes / Probably No / Definitely No

How important to you is the particular order of medical school preference on our UCCA application?

It represents a clear order of preference for me /

It is moderately important / It is not very important /

It is almost in 'chance' order

How old were you when you first had the idea that you would like to become a doctor? _____ years

How old were you when you definitely decided that you would like to become a doctor? _____ years

How much did the following people or things encourage or discourage you in applying to study medicine?

Strongly encouraged Moderately encouraged Not much influence Moderately discouraged Strongly discouraged

our parents				
our school teachers				
reading books				
watching television or films or listening to the radio				
reading newspapers				
our own general practitioner				
school friends or close colleagues				
people already studying at medical school				

Please !
Blank

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Order of
Importance

Learning about the social aspects of disease.	
Learning about the psychological aspects of disease.	
Learning about the physical aspects of disease.	
Learning how to take responsibility for patients.	
Learning how to carry out complex operations on patients.	
Learning about research.	

Have you decided on the nature of an eventual career in medicine?
(Tick the appropriate category)

- Yes, definitely _____
- Yes, I have inclinations towards a certain field, but have not finally decided ... _____
- No, but I have firmly decided against some kinds of work _____
- No, I am quite undecided _____

	15
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Whether or not you have made up your mind, please indicate your degree of preference for a career among the following broad types of medical work:-

Very Fairly Not very Uninterested
interested interested interested

	Very interested	Fairly interested	Not very interested	Uninterested
Basic medical sciences or original research				
Hospital or specialist work with continuing responsibility for patients				
Clinical practice outside hospital e.g. general practice				
Hospital or specialist work without continuing clinical responsibility e.g. radiology, anaesthetics				
Hospital or specialist work of a laboratory nature e.g. pathology, microbiology, biochemistry				
Para-clinical work e.g. public health, medical administration				

estimate how the following statements describe your study habits by placing tick in the appropriate box.

Please
Leave
Blank

Definitely Probably Probably Definitely
Yes Yes No No

prefer to follow up my own
leas rather than to concentrate
set work.

cover assigned work equally
ll whether it interests me or
t.

prefer not to restrict myself
ly to recommended reading.

do not consider the best way
learning is by only complet-
g the set work and doing the
quired reading.

find a discussion of a topic
re useful than a systematic
presentation.

find it difficult to tackle
omething unless I know just
at is expected.

don't let myself get diverted
to something unless I know
st what is expected.

isn't often I try to think
doing something differently
om the way described in
cture or book.

like to feel that everything
ortant is contained in my
tes.

	Definitely Yes	Probably Yes	Probably No	Definitely No

8				

you are not accepted for medical school this year will you:-

Definitely Probably Probably Definitely
Yes Yes No No

- ply to medical school again
t year?
- take your A-levels in order
obtain better grades?
- ply to university to study
ntistry?
- ply to university to read
ther biological science?
If so, what?
- ply to university to study a
r-biological science?
If so, what?
- ply to university to study
non-science subject?
If so, what?
- ply to study a para-
dical subject e.g. nursing,
ysiotherapy, etc.?
- er. Please specify

	Definitely Yes	Probably Yes	Probably No	Definitely No

you have any comments, or criticisms, of the medical school selection process, please write them here. Such comments are often the most valuable part of a survey.

Appendix 1-2.

St. Mary's study: Questionnaire 2.

University of London

St Mary's Hospital Medical School

Norfolk Place London W2 1PG 01-723 1252

Dean: Professor Peter Richards,
MA, MD, PhD, FRCP.

Secretary: K. Lockyer, BA.



Dear Interviewee,

As you probably know, at St. Mary's we are carrying out a research project on the selection of medical students, and you have probably already completed one questionnaire for us. Now that you have been selected for interview we would be grateful if you could take the time and trouble to complete a second set of questionnaires.

These questionnaires are fairly lengthy, but this is necessary in order to obtain an adequately broad perspective. Please do not take very long answering each question; it is your immediate reaction rather than a deeply considered response which interests us. You may feel that you are unable to answer some of the questions as you do not have sufficient knowledge or do not understand them; if this is the case, please leave that answer blank. This study is part of a much wider study involving several other medical schools and medical students who have progressed much further through the course, and the same questionnaire is intended to apply to all of them and hence some questions may well seem too complex for you. You may also feel that some questions are silly or pointless; nevertheless we do have good grounds for believing that these questions are useful, and we would ask you to bear with us in answering them. Finally, we are aware that some of the questions are derived from American studies and hence may seem to be worded in a strange way; once more, please try and bear with us.

As with the previous questionnaire, the present one has the full approval of the Dean of St. Mary's. It is however purely for the purposes of educational research and none of the replies will have any influence at all upon the process of selection and indeed will not be analysed until the selection process is complete. Since the questionnaire is not a part of the official selection process, please try and be as truthful as possible! The questionnaire is not a necessary part of your application to the medical school, and if therefore you are opposed to completing it this is a matter for yourself. Alternatively if you feel that you would prefer not to answer some questions please leave them blank. In the interests of research I would however be grateful if you could take the trouble to complete as much of the questionnaire as possible.

My thanks in advance for your cooperation,

J. C. McMenis MA, MB, ChB, PhD.

Questionnaire B1

Please Leave Blank

Name (in block capitals please) _____

Sex Male/Female

Today's date ____ / ____ / 19 ____ 4. Date of Birth ____ / ____ / 19 ____

What is the time now? _____ hrs _____ mins

8			
			1

Have you had your interview yet? Yes/No

If yes, at what time did it start? _____ hrs _____ mins

If no, at what time do you expect it to start? _____ hrs _____ mins

<input type="checkbox"/>	26
	30

How many other medical schools have:

- | | | | | | |
|--|---|---|---|---|---|
| i. Already interviewed you? | 0 | 1 | 2 | 3 | 4 |
| ii. Are definitely going to interview you? | 0 | 1 | 2 | 3 | 4 |
| iii. Have made you an unconditional offer? | 0 | 1 | 2 | 3 | 4 |
| iv. Have made you a conditional offer? | 0 | 1 | 2 | 3 | 4 |
| v. Have rejected you? | 0 | 1 | 2 | 3 | 4 |

<input type="checkbox"/>	31
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	35

The following questions concern your interests and activities; naturally here can be no 'right' answer to such questions.

Which of the following areas have you visited? Exclude areas you have only passed through. Answer by putting a tick in the appropriate column:-

Never Once only More than once

France			
Germany			
Italy			
Switzerland			
Holland			
Belgium			
Spain			
Portugal			
Greece			
Scandinavia			
Eastern Europe			
Middle East / North Africa			
Central / Southern Africa			
India / Far East			
Russia / China			
Australasia			
North America			
South America			

<input type="checkbox"/>	36
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	33

Please Leave Blank

Do you play any musical instruments? Not at all / Slightly / Adequately / Well (e.g. piano at grade V).

8			
---	--	--	--

Which instrument(s)?

Have you played in a group or orchestra? No/Yes

1

Estimate how many hours per week you devote to the following activities:

0 1 - 2 3 - 4 5 - 8 9 - 15 16+

Watching television						
Playing sport						
In a pub						
On hobbies						

12	

Do you play sport for a team? No/Yes

Estimate how many times per year you attend the following:-

0 1 - 2 3 - 5 6 - 10 11+

Theatre					
Opera					
Ballet					
Pop concerts					
Classical concerts					
Art galleries					
Museums					
Cinema					
Football matches					
Cricket matches					
Parties					

13
16

17

Estimate how many non-medical, non-school books you read per year:-

0 1 - 5 6 - 10 11 - 20 21 - 50 50+

Fiction						
Non-Fiction						

18
20

20

How many works have you read by the following authors? Please put a tick in the appropriate box.

More
None
One than
More
None
One than
None
One than
One

Isaac Asimov				Stendhal			
Jane Austen				Tolstoy			
Albert Camus				Leon Uris			
Dostoevsky				Virginia Woolf			
Margaret Drabble				Edward de Bono			
George Eliot				Erich von Daniken			
Frederick Forsythe				Charles Darwin			
Günther Grass				Eysenck			
Graham Greene				Freud			
Hermann Hesse				Galbraith			
Aldous Huxley				Illich			
James Joyce				R.D. Laing			
J.H. Lawrence				C.S. Lewis			
Joris Lessing				Marx			
Christopher Marlowe				John Stuart Mill			
Maupassant				Desmond Morris			
George Orwell				Karl Popper			
Harold Robbins				E.F. Schumacher			
John Steinbeck				Lyall Watson			
Solzhenitsyn				Gombrich			

31
50

30
40

Please Leave Blank

5. Do you smoke? No/Yes; please estimate your consumption:-

Cigarettes _____ (Number per day)
Pipe _____ (ounces per week)
Cigars _____ (Number per day)

8 | | |

6. How would you describe your religious beliefs?
Christian / Jewish / Agnostic / Atheist / Other (please specify)

9 | | |

7. How often do you attend church?
Never / On festive occasions only / Between three and ten times per year / About once a month / every week

| | |

8. Which hand do you write with? Always Right / Usually Right / Either / Usually Left / Always Left

9. How often do you read the following newspapers or journals?

Usually Moderately often Rarely Never

Table with 4 columns (Usually, Moderately often, Rarely, Never) and 12 rows (Daily Express, Daily Mail, Daily Mirror, Daily Telegraph, Guardian, Morning Star, The Star, Sun, The Times, Local Newspaper, New Society, The Listener, New Scientist)

10 | | |

For the following questions, on ethical, moral and political issues, please remember that there are no right or wrong answers: it is your opinions which are required. If you do not wish to answer a question, or do not understand it, please leave it blank.

Defin- Prob- Prob- Defin-
itely ably ably itely
Yes Yes No No

Is a strong professional identity necessary for the practice of good medicine?

Was the introduction of the NHS a retrograde step?

Are psychiatric hospitals in need of greater funds and resources, if necessary at the expense of other parts of the Health Service?

The Inverse Care Law says that in this country the areas with the greatest medical need have the least medical resources: can this be true?

Is psychosurgery justified on convicted criminals?

Table with 4 columns (Definitely Yes, Probably Yes, Probably No, Definitely No) and 5 rows corresponding to the questions above.

11 | | |

Defin- itely Yes	Prob- ably Yes	Prob- ably No	Defin- itely No
------------------------	----------------------	---------------------	-----------------------

GP s prescribe psychoactive agents too commonly as a panacea for all ills?

ould the following be provided or allowed under the NHS?

- i. Trans-sexual surgery
- ii. Cosmetic surgery
- iii. Contraception
- iv. Providing heroin for addicts

ould commercial competition necessary for progress in drug research?

ould GP s be able to prescribe brand-name drugs when cheaper equivalents exist?

ould barbiturate prescription be controlled by stricter legal procedures?

ould more health education be used to discourage cigarette smoking?

ould legislation be used to restrict cigarette consumption?

which of the following situations in which an abortion has been requested would you think that it should be performed?

- i. A woman with congenital heart disease who is unlikely to survive the rigours of childbirth.
- ii. A woman known to be definitely bearing a fetus with spina bifida.
- iii. A woman who might have had German Measles earlier in pregnancy.
- iv. A 13-year old girl who has been raped.
- v. A 25-year old woman who has been raped.
- vi. An unmarried woman who is pregnant as a result of failed contraception.
- vii. A woman who has failed to use any form of contraception.
- viii. A 38-year old mother of six.

ould patients have the right to full information about their illnesses?

ould a doctor have a patient who refuses the first-line treatment offered to him. Is it the doctor's duty to offer an alternative form of treatment?

ould more cancer patients be told the true nature of their condition?

ould Jehovah's witnesses have the right to expect a dangerous operation without the administration of blood?

ould Jehovah's witnesses have the right to expect that their children will be treated in accord with their own wishes?

ould the powers of the General Medical Council too far reaching?

ould amniocentesis be compulsory for all pregnant women?

ould all known carriers of genetic disease be sterilised?

ould poverty still a major cause of disease in this country?

ould it be possible that civilisation will cause more disease than cures?

ould all research on test-tube babies be prohibited?

ould politics relevant to medicine?

ould you welcome more articles about medicine in the newspapers if the articles were responsibly and accurate?

37

67

8						14
Defin- itely Yes	Prob- ably Yes	Prob- ably No	Defin- itely No			

- is compulsion preferable to education in decreasing birth rates in the developing world?
- Should the consultant be the only person responsible for making decisions about patient management?
- Should the consultant be the main person to make decisions about resource allocations and priorities in his own hospital?
- Concerning homosexuality:-
 - i. Is it pathological rather than just a variation of normal sexuality?
 - ii. Are homosexuals born rather than made?
 - iii. Should homosexuals be encouraged to be heterosexual?
 - iv. Should homosexual couples be allowed to adopt children?
- Should the state provide care and accomodation for the elderly?
- Can sociologists provide insights into medical practice?
- Do doctors sometimes impose their own moral pre-conceptions on their patients?
- Is there much in good medical diagnosis that cannot be written down in books?
- Have scientific advances in medicine led to a dehumanised attitude to patients?
- Should more consideration be given to social and psychological factors in disease?
- Is it reasonable to object to the use of ECT simply because the mode of action is unknown?
- Is it of any consequence if racial differences in intelligence are demonstrated?
- Should researchers be allowed to research into differences in intelligence between races?
- Is co-education desirable in secondary schools?
- Should greater status be given to ability and experience rather than to educational qualifications?
- Is there too much violence on television?
- Is your opinion does television violence exacerbate teenage crime?
- What percentage of the wealth of this country do you think is owned by the richest 10% of the population? _____
- If there were a general election tomorrow, for which party would you vote? _____

--	--	--	--	--	--	--	--

35

How long did it take you to complete this questionnaire?

_____ minutes

If you have any comments you would like to make, either about this study in particular, or medical student selection in general, please write them on this sheet. Such comments are often the most valuable part of any survey.

Thank you for your help by completing this questionnaire. Please place it in the envelope provided, write your full name on the outside of the envelope, and return it immediately to the Porter's Lodge.

Appendix 1-3.

St. Mary's study: Dean's proforma.

Applicant's Name _____

UCCA Number _____

Study Number

8					0
---	--	--	--	--	---

Exceptionally Good Very Good Moderately Good Indifferent Poor

Level Results					
Level Grades					
Interests					
Contribution to life of school					
Achievement					
Contribution to community					
Admission report					
Essential					

Definite Interview	A	
Probable Interview	B ₁	
Possible Interview	B ₂	
Probably not interview	C ₁	
Definitely not interview	C ₂	
Courtesy Interview		18



Candidate pre-interviewed		19
Candidate known personally		
Parents known personally		
School known personally		
Attached correspondence		
Other		24

Appendix 1-4.

St. Mary's study: Interviewers' proforma.

Appendix 1-5.

Birmingham study: Questionnaire and variants for follow-up survey.



The University of Birmingham

Medical School, Vincent Drive, Birmingham B15 2TJ
Telephone 021-472 1301

Dear Student,

As part of a study involving several universities I am distributing a large questionnaire to your year, which I would be grateful if you would take the trouble to complete. The questionnaire is long and detailed but this is necessary in order to obtain an adequately broad perspective.

Naturally, as in all such research, your replies will be kept strictly confidential. We would however appreciate it if you would give your name as this will allow a follow-up at a later date. I must emphasise again that this data is confidential and is totally independent of any university body and is solely for the purposes of research.

The questionnaire covers a wide range of topics and it is possible that you will either not want or not be able to answer a particular question: if so, simply leave that reply blank.

Please return the completed questionnaire in the enclosed envelope, to the 'L' pigeon-hole in the Medical School. If you have any comments to make please feel free to write them in the space left for this purpose on the back of sheet 9.

Thanking you in advance for your co-operation,

D. Lockwood

Diana N.J. Lockwood
Medic VI

Please
leave
blank

which of the following categories does your father's occupation come? The
occupations are those of the Registrar-General.

1. Professional occupations, etc. e.g. University teachers, higher executives, company directors, lawyers, etc..
2. Intermediate occupations e.g. teachers, journalists, authors, civil servants, pilots, managers, technicians, musicians, etc..
3. Skilled occupations e.g. accounting and costing clerks, craftsmen, foremen, shopkeepers, mine-workers, and other skilled workmen, etc.
4. Semi-skilled occupations e.g. postmen and telephone operators, agricultural workers, etc..
5. Unskilled occupations e.g. building and dock labourers, etc..
6. Armed forces (please state rank).
7. Others.

2	1

which county is your parental home? (n.b. new counties please!)
you are not British, what is your nationality? _____

	6
	8

you smoke? No / Yes. If Yes, please estimate your consumption:-

Cigarettes _____ (Number per day)
Pipe _____ (ounces per week)
Cigars _____ (number per day)

	9
	11
	13
	15

would you describe your religious beliefs?
Christian / Jewish / Agnostic / Atheist / Other (please specify)

often do you attend church?
Never / On festive occasions only / Between three and ten times per year /
About once a month / Almost every week.

	17
--	----

you intend to emigrate to a developed country?
Definitely Yes / Probably Yes / Probably No / Definitely No.
If so, would it be temporary or permanent?
Which country?

	19
--	----

you intend to emigrate to a developing country?
Definitely Yes / Probably Yes / Probably No / Definitely No.
If so would it be temporary or permanent?
Which country?

	2
--	---

how did you make up your mind about a future career?
Definitely / Probably / Possibly / Not at all.

	22
	24
	26
	28

please give your first three choices for a career (be as specific or as general
as you like, even if you are not at all sure).

- 1.
- 2.
- 3.

of the following areas have you visited? Exclude areas you have only
travelled through. Answer by putting a tick in the appropriate column:-

	Never	Once only	More than once
France			
Germany			
Italy			
Switzerland			
Holland			
Belgium			
Spain			
Portugal			
Greece			
Scandinavia			
Eastern Europe			
Middle East / North Africa			
Central / Southern Africa			
India / Far East			
Russia / China			
Australasia			
North America			

	30
	32
	34
	36
	38
	40
	42
	44

...owing newspapers or journals?

Usually Moderately often Rarely Never

Daily Express
Daily Mail
Daily Mirror
Daily Telegraph
Guardian
Morning Star
Sun
The Times
Local Newspaper
New Society
The Listener
New Scientist

	Usually	Moderately often	Rarely	Never

lea
bla
4
T

imate how the following statements describe your study habits, by placing a k in the appropriate box.

Definitely Probably Probably Definitely
Yes Yes No No

refer to follow up my own ideas
er than to concentrate on set work.

ver assigned work equally well
her it interests me or not.

refer not to restrict myself only
ecommended reading.

not consider the best way of
ning is by only completing the set
and doing the required reading.

nd a discussion of a topic more
al than a systematic presentation.

nd it difficult to tackle something
ss I know just what is expected.

rt let myself get diverted onto
hing unless I know just what is
ted.

sn't often I try to think of doing
hing differently from the way
ibed in lecture or book.

le to feel that everything
tant is contained in my notes.

	Definitely Yes	Probably Yes	Probably No	Definitely No

18
19
20
21
22
23
24
25
26

ollowing questions, on ethical, moral and political issues, please remember
e are no right or wrong answers: it is your opinions which are required. If
t wish to answer a question, or do not understand it, please leave it blank.

Defin- Prob- Prob- Defin-
itely ably ably itely
Yes Yes No No

strong professional identity necessary for the
ce of good medicine?

ne introduction of the NHS a retrograde step?

ychiatric hospitals in need of greater funds and
ces, if necessary at the expense of other parts
Health Service?

erse Care Law says that in this country the
with the greatest medical need have the least
l resources: can this be true?

...justified or convicted criminals?

	Definitely Yes	Probably Yes	Probably No	Definitely No

27
28
29
30

Definitely Yes	Probably Yes	Probably No	Definitely No
----------------	--------------	-------------	---------------

Question	Definitely Yes	Probably Yes	Probably No	Definitely No
Should immediate infanticide be permissible for children born with gross multiple abnormalities?				
Should euthanasia be possible if a patient has previously agreed to whilst in full possession of his faculties?				
Should euthanasia be possible even if a patient has previously made no statement as to his wishes?				
Is it reasonable to remove kidneys for transplantation from any patient victim, post mortem, unless specific written evidence to the contrary is found?				
Do you think that there is a tendency for Asian doctors in the UK to not be given promotion because of their race?				
Do you think it is more difficult for the GP than for the hospital consultant to keep up to date in medicine?				
Do you think the GP will play a vital role in the delivery of medical care in the future?				
Do you think the working environment of the GP is less intellectually stimulating than that of the hospital consultant?				
Do you think the GP deserves as much prestige in the medical profession as does the hospital consultant?				
Do you think the GP should play a larger role in the teaching of the medical student?				
Do you think that the financial reward of the GP is satisfactory compared to other branches of medicine?				
Do you think that the GP tends to develop more interesting relationships with his patients than does the hospital consultant?				
Do you think most doctors enter general practice because they are unable to get a hospital consultant's post?				
Are GPs as well qualified as hospital consultants?				
Do you think only pre-clinical medicine should be taught which is directly relevant to clinical medicine?				
Is detailed knowledge of anatomy essential for all doctors?				
Should the teaching of undergraduates at peripheral hospitals be encouraged?				
Should competition provide a useful way of emphasising important subjects in a curriculum?				
Should practical experience be more important than academic knowledge in the education of medical students?				
Should students be encouraged to question views expressed by consultants?				
Do you think that consultants might often put over their own personal views under the guise of medical opinion?				
Should private practice be acceptable for consultants within the NHS facilities?				
Should private practice be acceptable if it is entirely independent of the NHS?				
Is it likely that criminality will be shown to be a genetic phenomenon?				
Should insanity be regarded as a mitigating factor in criminal proceedings?				
Should mentally ill criminals be treated in prisons rather than hospitals?				



The University of Birmingham

Medical School, Vincent Drive, Birmingham B15 2TJ
Telephone 021-472 1301

Dear Student,

You may remember that a while ago we asked you to complete a lengthy questionnaire. We had an excellent response to that questionnaire, and the results are being analysed at present. However we are also interested in the way in which attitudes, etc., have changed since that previous questionnaire; we are therefore asking you, whether or not you completed the previous questionnaire, you would be willing to complete the enclosed questionnaire. We realise that this questionnaire is very long, but this is necessary in order to obtain an adequately broad perspective. We have included almost all of the questions from the previous questionnaire, so that if you completed the questionnaire before we would be grateful if you would bear with us and complete the whole questionnaire this time. May we also assure you that at present we have no plans for a further follow-up.

Naturally, as in all such research, your replies will be kept strictly confidential. It would be appreciated if you could give your name as this will allow us to compare and contrast the results with the previous results. I must emphasise again that this data is confidential and is totally independent of any University body and is solely for the purposes of research.

The questionnaire covers a wide range of topics and it is possible that you may either not want or not be able to answer a particular question: if so, please simply leave that reply blank.

Please return the completed questionnaire in the enclosed envelope, to the 'L' pigeon-hole in the Medical School. If you have any comments to make please feel free to write them in the space left for this purpose on the back sheet 9.

Thanking you in advance for your co-operation.

D. Lockwood

Diana N.J. Lockwood
Medic VI

sex: male / female

Married / Single.

Year of Birth: 19 __

Type of school attended:- Comprehensive / Direct Grant / Grammar / Independent Public School / Private / Secondary Modern / Other (specify)

Was your school single-sex or mixed? _____

A-level grades obtained:- Subject Grade

a. b. if a subject has been taken more than once please give best grade obtained.

What A-level grade 'offer' was made to you by this university? (e.g. 2 B's and a C).

Which universities and subjects did you write on your UCCA form?

University Subject

- 1. 2. 3. 4. 5.

Date of leaving school: month _____ year _____

Did you have any further education between leaving school and entering university (e.g. technical college, other university, etc..) _____

What did you do between leaving school and entering university? Please estimate duration in weeks or months.

Weeks Months

Working in this country:

Working abroad:

Travelling abroad:

On holiday in this country:

At home in this country but not working:

Other (please specify) :

Would you recommend to others that they should take a year or more off between school and university?

Definitely Yes / Probably Yes / Probably No / Definitely No.

Have you taken an intercalated degree during your medical course?

No/Yes If Yes, in which subject? _____

Would you recommend to others that they should take an intercalated degree during their medical course?

Definitely Yes / Probably Yes / Probably No / Definitely No.

Would you welcome the introduction of intercalated degrees in subjects other than Anatomy, Physiology, Biochemistry, or Pharmacology?

Definitely Yes / Probably Yes / Probably No / Definitely No.

Is your father a doctor? No / Yes. If Yes, is he a GP? No / Yes.

Is your mother a doctor? No / Yes. If Yes, is she a GP? No / Yes.

How many siblings (brothers and sisters) have you? _____

How many of your siblings are aged 17 or over? _____

How many of your siblings are studying medicine or are doctors? _____

At what age did you first seriously consider that you would like to be a doctor? _____

How much did your parents persuade you against your own wishes to study

Vertical grid on the right side of the page with various markings and numbers.

Appendix 1-6.

Cambridge study: Variants of questionnaire from Birmingham study.

UNIVERSITY OF CAMBRIDGE

CAMBRIDGE (0223) 51386 (4 LINES)

THE PSYCHOLOGICAL LABORATORY,
DOWNING STREET,
CAMBRIDGE,
CB2 3EB

Dear Student,

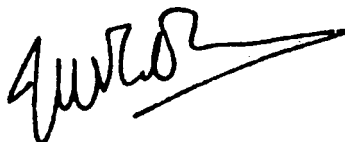
As part of a study involving several universities I am distributing a questionnaire to all of the medical students in the university. I would be grateful if you could take the trouble to complete this questionnaire; it is long and detailed but this is necessary in order to obtain an adequately broad perspective.

Naturally, as in all such research, your replies will be kept strictly confidential. We would however appreciate it if you would give your name and college as this will allow a follow-up at a later date. I must emphasise again that this data is confidential and is totally independent of any university body and is solely for the purposes of research.

The questionnaire covers a wide range of topics and it is possible that you will either not want to or not be able to answer a particular question: if so, simply leave that reply blank.

I am also enclosing a second shorter questionnaire which I would also be grateful if you would complete. (The handedness questionnaire is incidentally completely unrelated to the other one). Please return the completed questionnaires in the enclosed envelope via the Internal Post. If you have any comments on the questionnaire please feel free to write them in the space left for this purpose on the back of sheet 9. If you have any questions please contact me at the Psychological Laboratory.

Thanking you in advance for your co-operation,



I.C. McManus MA, MB, ChB.

