INDIVIDUAL STUDY

Innominate science, the specialty of general practice

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SPECIALTIES grow by an internal logic. The logic develops with the acquisition of knowledge and the application of ideas, concentrated within boundaries; the bounaries change their shape as the pressures within them force them to do so. If general practice grows only by accepting knowledge and ideas from others, and changes its shape only as social, political and economic pressures from without dictate, it cannot hope to claim the status of an academic discipline. At best it can claim a specialized function—that of protecting the true specialties by mustering a unique range of limited abilities to check the onslaught of the public.

While not denying either the absolute necessity for clinical competence or the need to accept the requirements of society, this paper will attempt to show that general practice has an academic territory of its own. Within this territory general practice can absorb and assimilate all the knowledge and skills it accepts from elsewhere, and put them to functions which are its own.

With all clinicians, the general practitioner shares a concern for sick people; with the psychiatrist he shares a special interest in the behavioural problems that affect health; but, unlike any other specialist, he is involved with the health of a particular group of people over a long period of time. When he works in any other clinical situation he is outside his own territory. Though interested in behaviour, the general practitioner does not share the professional passions of the psychologist, the sociologist, the anthropologist, or the social worker, for he is a doctor. His primary concern being the health of his patients, he can value the insights of the behavioural sciences only insofar as they offer him help in his clinical tasks.

The study of the psychosocial factors that affect the health and treatment of a patient in the context of continuing medical care has never been given a name, nor does any euphonious title come readily to mind. I have called it the 'innominate science'; I believe that the general practitioner and no one else is happy to regard this important territory as his own, and that the knowledge and ideas developed within it will be of value to all other clinical disciplines.

If this thesis be accepted, it becomes essential to identify the concepts of the behavioural sciences which the general practitioner should understand, the situations in which they are most relevant, how they are to be learned, and how applied. The behavioural sciences may not yet have as rigorous an academic structure as the biological sciences, but their methods are rapidly evolving and at this stage have many lessons for us.

There are many ways in which these concepts may be considered, and none seems completely satisfactory. I have found it helpful to think in terms of four main areas—perception, rôle, personal relationships and stress—and to accept the inevitable overlap involved. The ideas presented originate from many sources and will not receive individual attribution. Many of them come from the works of Argyle (1967), King (1962),

Mechanic (1968), Simmons and Wolff (1954); reference to these authors will provide further ideas, detailed experimental evidence and a very full bibliography.

Perception

On a narrow definition, perception is what happens when sensory organs are stimulated; for the purposes of this paper it will mean, more widely, the way in which a person 'sees' a situation and its potential effects upon him, and it plays a major part in deciding what actions he will then take. It is the *intervening variable* between stimuli and behaviour; it has been shown to be based on both objective and subjective factors. Broadly speaking, the determinants of perception are physiological, psychological, and sociocultural; they may be considered separately, but in practice are inextricably interwoven.

Physiological determinants. These are of many kinds, e.g. hunger, sexual arousal, the effects of alcohol and other drugs, the toxic confusion of many illnesses, and individual characteristics such as obesity, extremes of height, sensory competence, disability or deformity.

Psychological determinants. These are of three kinds. First are the personal needs which may be conscious or below the surface, which are accompanied by emotion, and which provide motivation. Second are the adaptive and defence mechanisms called into play when there is conflict between needs and beliefs, or between psychological factors and physiological or sociocultural factors. No clear boundary exists between healthy and unhealthy adaptive and defence mechanisms, but neurotic defences involving repression, denial or projection are often seen in clinical practice. Third, are the beliefs, attitudes and values which provide the personality with more permanent ways of ordering perceptions. Many of these are based on the individual's need to identify with a group, and form part of an intricate structure; some are peculiar to the individual.

Sociocultural determinants. Culture and society may be looked at separately, though they always co-exist. Society is a system of positions and relationships that exerts pressures to adapt on its members. The way in which it influences perception is usually discussed as 'rôle theory' and will be considered later. Ants or bees may have a society without a culture, but man does not do so. Culture is an acquired system of shared and transmitted ways of living. Within a human society there will be both a broadly-accepted culture and many subcultures based on race, social class, profession, religion and other groups, diminishing in size down to the family.

It is clear that a way of life learned by experience from all the other people with whom an individual has contact will influence the way in which he perceives a situation, and the anthropological and sociological literature is full of examples, both primitive and modern.

All these factors determine the way an individual defines his experiences, his definitions will largely determine how he reacts to situations, and his reactions are often revealed in typical behaviour patterns. For the general practitioner, the phenomena of greatest interest will be those that cause a person to seek medical help; the patient's definition that requires him to seek help of any sort, his definition of what constitutes illness, and of what the function of a doctor is.

Rôle

The theory of rôles is a major conceptual tool of the sociologists, and is useful for thinking both about society and about the individual.

Within societies there are positions—collections of rights and duties known by a single term such as 'mother', 'teacher', 'king', and so on. The actions of people in filling these positions comprise the rôles; and the rôle is linked with the position rather than with the person occupying it. Society has expectations about the behaviour of the incumbents of rôles in relation to others—doctors with patients, doctors with nurses,

or doctors with administrators, for example. These expectations may be more or less rigidly defined. How an incumbent understands his rôle will depend partly on the clarity of the definition and partly upon his personal characteristics. How he behaves within it will depend upon the degree of correspondence between society's expectations and his own understanding.

Some rôles are ascribed and some achieved. Ascribed rôles are assigned by society without regard to the individual and depend on variables such as age, sex, race, class, and blood relationships. Achieved rôles, increasingly important as society becomes more complex, are those open to be filled by individual effort.

Rôle-conflict occurs when one person occupies two positions that have opposing demands—the career woman with small children for example. Rôle-distance is described when an individual wishes to show that there is more to him than may be seen from his rôle and stands back from it, in perhaps a jocular way. There are many other modifications of the original theory of rôles and references to sociological works will give a much fuller picture.

Of importance to medicine are the concepts of the sick-rôle and the doctor-rôle. All cultures define illness in their own way: Whether major epilepsy is to be regarded as a sign of divine grace or as an illness; whether it is the presence or absence of intestinal worms that is normal; whether homosexuality or disagreement with the government are crimes or signs of mental illness, for example. All societies evolve some rôle-player whose task it is to deal with the people defined as ill—naturally enough, for illness poses a threat to society as well as to the individual.

To the one who is ill society extends certain privileges, such as permission to abdicate usual rôles and responsibilities, and sympathy and help from other people, providing that he displays his desire to get better by acting in the approved manner and co-operating with his doctor. The doctor acts as an agent of society in restoring the patient to his proper rôles. In return for this, the doctor is also extended certain privileges: High prestige, the right to sanction or withhold the benefits of the sick rôle, the right to conduct intimate physical or verbal examinations, and the right to apply potentially-dangerous techniques. When the expectations that lie behind these privileges are not satisfied, society is greatly disturbed.

At a personal level, the taking-on of the sick-rôle may involve difficulties for the individual. To abdicate his responsibilities may conflict with his psychological needs, and this conflict be compounded with his fears about the meaning of his symptoms. The gains he derives from the sick-rôle may correspond with his needs, but thereby conflict with the expectations that society has of him. His views of the medical profession will be influenced by his cultures, his perceptions, his attitudes to seeking help, and his previous medical experiences. His views of his own doctor will be similarly based.

The doctor's understanding of his rôle will be based on society's definition (though the rôle of the general practitioner is not at present clearly defined), his medical education and his own needs, attitudes and beliefs. He must also be able to decide what rôle his patient wishes him to fill—scientist, magician, or father, for example—and act accordingly. The more of these rôles that the general practitioner can play, the more useful he will be. His rôle-concepts are equally involved in his co-operation with other health workers, for rôle-overlap is a fruitful source of professional conflict.

Personal relationships

Man is a social animal. In babyhood he cannot exist without the aid of others, and even in adulthood most men find solitary confinement unbearable. The sources of social behaviour have been described by Argyle as sevenfold, each having certain goals:

Non-social drives producing social interaction—the biological needs for food and water, and various kinds of co-operative or competitive behaviour.

Dependency—acceptance, interaction, help, protection, and guidance, especially from figures of authority; based on childhood experience.

Affiliation—physical proximity, eye contact, warm and friendly responses, acceptance by peers.

Dominance—acceptance by others as leader, decision-maker, and figure of authority.

Sex—physical proximity, bodily contact, eye contact, warm and intimate social interaction, usually with attractive peers of the opposite sex.

Aggression—to harm other people verbally, physically, or in other ways.

Self-esteem—for the approval of others and the acceptance of the self-image as valid.

The importance of these sources will vary from one person to another, and from time to time; upon the resulting formula depends the style of behaviour, which is displayed by many social techniques. The techniques have the purpose of eliciting the responses which are desired. Some techniques are conscious, like smiling; others are used unknowingly, like eye movements and body posture; while others are unintended, like speech errors. All the elements of verbal and non-verbal communication combine to make a style; styles can also be classified generally, for example, into those used to establish intimacy or dominance. Style is greatly influenced by the fashions of culture and subcultures. Everyone has a *repertoire* of behavioural styles learned both deliberately and by trial and error; it varies with age, sex, needs, intelligence, professional training, and other aspects of perception.

There is now a considerable research literature on non-verbal communication. The areas covered include bodily contact, physical proximity, gestures, facial expressions, eye movements, patterns of speech and silence, speed of speech and speech errors. There are non-verbal communications which are of special interest to someone, like the general practitioner, with previous knowledge of the communicator. These are matters under direct control, such as tidiness and cleanliness of dress, person and home.

The content of speech also plays a large part in social transactions because it tries to influence the behaviour of the listener. Nuances of speech, even within one language, vary widely according to the social class, education, profession, or age, for example of the speaker. There is ample room for misunderstanding in verbal communication, particularly from the difficulties which patients may have in understanding medical terminology. The factors which influence a patient's memory of the advice given to him are the number of instructions offered, his understanding of them, and his motivation to follow them.

The school of transactional analysis, popularized through the writings of Berne, postulates that the sources of inter-personal behaviour are two hungers—hunger for recognition (based on infantile stimulus-hunger) and hunger for the structuring of time (the need to avoid boredom)—starvation in either area being biologically disastrous. In the absence of the true goal of a relationship, which is intimacy, a variety of lesser substitutes is accepted—*rituals*, *pastimes*, and *games*. Games are the most complex of these, and Berne's analysis of the neurotic behaviour revealed in games people play can be very illuminating in clinical situations.

The study of relationships within groups is also of value. The group of greatest interest is naturally the family, for as a family doctor the general practitioner has the clinical privilege of observing patterns of conjugal rôle, the processes that result in the

satisfactory or unsatisfactory adaptations of the growing child, and the internal and external pressures which unite or disrupt the family unit.

The study of other kinds of groups is of less immediate concern to the general practitioner, though it may be of some importance clinically for the light it throws on the behaviour patterns of a patient. A deeper knowledge of group dynamics will certainly be of value to general practitioners involved in academic teaching.

The relationship of patient with doctor is the one of most importance for medical study. It is based on the consultation and on everything in their previous experiences that the two parties bring to it.

The patient presents to his doctor a problem or set of problems which he wishes to be understood, organized and solved. We have seen how illness is a relative term defined by the patient's culture and subcultures, and how the rôles of patient and doctor are defined and privileged by the society in which they live. We have also seen how the patient's perceptions influence his definition of the problems and his reactions to them. To these forces, within the general-practice situation, are also added his previous knowledge of the competence, understanding, and approachability of the doctor.

The general practitioner brings to the situation his clinical skills and experience, his previous knowledge of the patient and the patient's family. He also brings a host of personal attributes—the results of cultural, subcultural and social pressures, his own perceptions and reaction patterns, his inter-personal skills and the strength of his motivations to recognize and help with the problems presented to him. One of the greatest assets of the innominate science is that it forces the general practitioner to be aware of the effects of his own personality upon the dynamics of the consultation and management processes. If the general practitioner does not know himself there are two unknown factors in the consultation-equation, and the most trivial acquaintance with algebra will remind us of what this implies for the solution.

The relationship which grows between a patient and his general practitioner is important, not only because it determines how adequately the patient will communicate his problems, but also because it often provides a reflection of his other relationships and thereby facilitates the doctor's understanding of those problems.

Stress

Stress may be thought of as a discrepancy between the demands made upon a person and his potential responses to them. The demands may come from the physical environment either internally, as for example, cancers, or externally, as for example the climate, the water supply or epidemics. There are also demands imposed by society and culture and these too can provoke stress. If a man cannot fill his rôles in the way that society expects, he will feel that he has 'failed' and suffer emotionally. If he cannot adapt to some of the norms of his culture he will also suffer; this is most apparent when there is a sudden change of culture as in the case of immigrants, or people entering or leaving various institutions.

The potential responses of the individual depend upon three factors—his ability to cope, provided by his skills and training; his ability to handle his emotional reactions (defence mechanisms); and his motivation or involvement in the situation. These factors are all influenced by society as it offers opportunities for developing skills and provides incentives or disincentives, approval or disapproval, for certain courses of action.

Individuals vary in their experience of emotional stress, and to understand the stresses suffered by a patient, it is necessary to know both the sociocultural system in which he lives and how it relates to his individual characteristics. No doctor is as well placed as the general practitioner to comprehend these variables, for he lives closer to his patient's subculture than any other medical man, and his knowledge of the patient over a

period of time allows him to recognize typical behaviour patterns.

The individual's adaptation to external forces and its relationship to health may be considered from Simmons and Wolff's table:

		CONSEQUENCES		
		Physical	Social	Cultural
SOURCES	Physical	A	B	C
	Social	D	E	F
	Cultural	G	H	I

Reading across the line, A covers the phenomena linking physical stresses to their physical consequences, *e.g.* bacterial infection or traumatic pain. B and C point to the social and cultural effects of physical illness, *e.g.* disability, such as blindness, affecting social rôles. E, F, H, and I pertain to the relationships of social and cultural forces, *e.g.* social changes, such as inventions becoming sources of hazard (road accidents, occupational diseases), and cultural changes such as the breakdown of organized religion or population shifts from country to town.

D and G show the effects of culture and society on the physical health of the individual. Epidemiologists have studied the effects of poverty, poor housing and social class, for example, upon health; but though these are clear for populations, they are not always easy to prove at the individual level. For each person the important factor will be his own perceptions of the social or cultural variables.

To link medical and social concepts about health, we may consider the sequence: situation ⟶ stress ⟶ reaction pattern ⟶ identifiable structural change. Each arrow represents a set of unknown variables; the first is in the territory of the sociologist, the third is in that of the doctor and will be discussed as psychosomatic medicine, while the second is for doctors and sociologists to consider together, with the general practitioner as innominate scientist having a major part to play.

Psychosomatic medicine has been based on the awareness that psychological and social experiences are associated with changes in physiological states. Despite a large volume of research in this field there are more questions than answers in it. Many such physiological changes have been studied, e.g. heart rate, blood pressure, blood supply to various mucosae, skin conductance, blood-clotting, and serum cholesterol levels. That there is not always a good correlation between these changes, and that the changes do not always correlate well with subjective reports of stress, may be due to our present crude methods of measurement. Attempts have also been made to link specific diseases with certain psychological states. Much evidence has been produced, but it has not yet been structured into a clinical tool of accepted value.

A complication in psychosomatic research is the difficulty of separating the rôle of psychological factors in producing disease, from their rôle in affecting the patient's response to his symptoms. Failure to achieve this separation can cause serious errors by producing populations to study, that are not random. There is evidence that people with symptoms are more likely to come under medical care if they are also experiencing stress. This has great relevance to the general practitioner—it may for example account for frequent demands for consultation by people who are unhappy in their work. Research has also been done on the relationship of stress and certain infections, such as tuberculosis, brucellosis, streptococcal infections, and Asian influenza. It was found in one study that delayed recovery from Asian influenza was related to psychological difficulties at the time of the infection.

It seems reasonable to conclude at the present time that stress is often a contributory factor in disease, perhaps more in some diseases and some people than in others.

We have now looked at the four behavioural science concepts that are the basis of

innominate science. Before leaving the behavioural sciences, we might note that they have contributions to make to our work outside innominate science—developmental psychology and the statistical methods of epidemiology are examples, for application both in probability-diagnosis and in research.

The implications of innominate science

We must next consider the implications of innominate science. They fall into four groups: Implications for the delivery of medical care, implications in illness situations, implications in training for general practice, and implications for the individual general practitioner.

Implications for delivery of medical care

At a national level, the most that can be said is that recognition of innominate science as the specialty of general practice implies two things: The raising of the status of general practice within the medical profession, and the necessity for continued pressure on central government to find ways of giving the general practitioner more time to attend to his patients.

At the level of an individual practice, there are other implications. Since major evaluations of patients cannot be made frequently, ways of recording the perceptions, rôles, relationships and stresses discerned by the doctor must be perfected. The same concepts must be applied to the health team within the practice, and opportunities made for its members to define their perceptions, rôles, relationships and stresses in the work situation. Each member of a team will have his or her own needs, values, attitudes, rôle-concepts and stresses, and the resulting interactions will have a profound effect upon the efficiency of the practice organization.

Implications in illness situations

There will be few occasions in general practice when innominate science is totally irrelevant, many when it is needed, and some when no other approach is valid. Only by a painstaking history can the three be differentiated, and this means that the general practitioner must be ready to let his patient tell him the real reasons why a consultation has been sought. On paper such a statement may sound simple; in practice it may call for great resources of knowledge, skill, and patience, as experience with handling psychosexual problems for example, will testify. Unearthing a patient's 'hidden offers' is heavy work, and innominate science provides a hazel twig to divine them and a spade to bring them into the light.

In preventive medicine too there is use for innominate science, because a patient may be at risk from psychosocial factors just as from metabolic or genetic factors. To identify them before they erupt in crisis is a valid aim for any health team.

Implications in training for general practice

If the innominate science represents an important clinical tool, it must be recognized in the undergraduate curriculum. Greater emphasis on psychology and sociology must be made in pre-clinical studies. These subjects will best be taught by psychologists and sociologists who have a particular interest in their application to medicine. Despite the contrary view of the Todd Report, such particular interests would seem more likely to develop with the creation of departments of behavioural science within medical schools than if reliance is placed upon co-operation between university faculties. For clinical students, innominate science teaching must come from general practitioners, and this is the major function of departments of general practice.

Learning innominate science at the postgraduate vocational level is more complex. Again the concepts of the behavioural sciences may come best from their own professionals, particularly if there is a department in the medical school, but again clinical

applications can come only from clinicians—the general-practitioner teachers. One learning situation for the general-practitioner registrar will arise from observing his teacher; others must be devised, and small group discussions of particular cases would seem suitable. To make clear the rôles of the various members of the health team, it would be valuable sometimes to include in these discussions people training to be the social workers, health visitors and nurses of the team.

Implications for the individual general practitioner

It was earlier suggested that reactions to stress depended upon three factors; ability to cope, ability to handle ones emotional reactions, and motivations or involvement. This classification is valid for the general practitioner.

His ability to cope depends upon his training and the skills he has acquired—matters which his education and experience should give him.

His ability to handle his emotional reactions depend on his recognizing that innominate science applies to everyone, including doctors. If he is not aware that his perceptions are subjective, that he has been influenced by his society and culture and that he has needs, values, attitudes, beliefs and reaction patterns like everyone else, he is behaving too unscientifically to be an innominate scientist. He must know himself before he can use his perceptions diagnostically and his relationships therapeutically.

His involvement is fundamentally important, for his knowledge is useless without the regard for his patients that makes him wish to use it. Only this regard will bring him sensitivity to his patient's needs; only this regard will sustain his efforts; and only this regard will justify the whole edifice of the innominate science.

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