VESTES: THE AUSTRALIAN UNIVERSITIES' REVIEW
VOL. XVII No. 2
AUGUST 1974

BOUNDARIES BETWEEN DISCIPLINES

EDITORIAL

VESTES Symposia are intended to be controversial, and this year's, suggested by Mr. C. Castan of the University of Queensland, is no exception. It is, however, one of unusual complexity which precludes a simple contrast between black and white.

New disciplines spring up on the boundaries of established ones, and remain for some time part of both neighbouring fields; in due course some become established as subjects in their own right, such as biochemistry, while others remain trans-disciplinary.

Professional schools are nearly always multi-disciplinary because of the needs of the profession; for example, a school of architecture needs instructors as diverse as painters and engineers.

In addition there are "horizontal" inter-relations. For example, linguistics can be considered a discipline in its own right or a specialist field in each of a number of separate language departments.

These issues would be a matter for cool academic discussion if they were not tied up with the administrative organisation. In the older Australian universities each discipline is organised as a department. The department may be governed autocratically by a professor or democratically by its staff, but it tends to be a water-tight unit which firmly controls its human and physical resources. Both students and staff are liable to encounter obstacles when they need to work in several different departments. Some of the Australian universities founded in the 50s and 60s established schools comprising several neighbouring disciplines to remove these boundaries. In doing so they created even more formidable barriers than those surrounding the traditional departments, although fewer people are affected by them. Professor Hill's article is thus of particular interest, and we wish Murdoch University that it will succeed in solving what may seem an insoluble problem.

The removal of boundaries between disciplines is in itself controversial, and it involves judgments which are often made emotionally. Should we graduate an engineer who has not studied the humanities at the university, or an arts student who knows no science? Is a medical historian a second-rate historian or a second-rate physician who has found something he can do reasonably well

or is he creating a much-needed appreciation of the effect of the past on present practice? The issue is decided in professionally useful fields by its success; few are likely to criticise a bio-engineer who produces a new and useful artificial hand, even if he utilises only established scientific knowledge. It becomes particularly controversial on the boundaries of art and science. Is computer art a gimmick, an interesting application of computer science, or an important advance in fine art?

There are so many different aspects of this problem that only some can be discussed on the space available. The coverage is largely accidental, since most of the following contributions were received in response to an advertisement in *Vestes*. We hope you will find them stimulating, and if you have any comments (not more than 500 words please) we shall be pleased to publish them in the next issue of *Vestes*.

H.J.C.

SCHOOLS, DISCIPLINES AND PROGRAMMES: TRENDS IN MURDOCH UNIVERSITY THINKING

BRIAN V. HILL*

FOOLS rush in! I have put myself, and to some extent my colleagues, at risk by accepting the invitation to contribute to this symposium on behalf of the planning team at Murdoch University. Our tentative declarations of intent have yet to be tested in the crucible of experience,[1] but I have been assured that they have value in a symposium of this kind, as counterpoint to descriptions of compromised practice. Here then, as I see it, is some of the reasoning behind our approach to the disciplines at Murdoch.

The Logic of Enquiry

Disciplined enquiry began as philosophy: a love of knowledge generated by a roving rational curiosity about *all* phenomena. Through the centuries, philosophy precipitated various forms of enquiry, which achieved relative autonomy as "disciplines". Each was characterised by: (a) a body of tested knowledge and hypotheses concerned with a particular order of phenomena (e.g., stars, atoms, historical events, life forms, arguments); (b) reasonable agreement as to which forms of enquiry were appropriate to examining this

* Dr. Hill is the foundation professor of education at the Murdoch University.
[1] Formal teaching will commence in 1975.

content (e.g., deduction, observation, experiment, personal experience); and (c) paradigm theories and experiments which, in writing, constituted the definitive classics of the discipline.

The original mediaeval "faculties" were based on broadly conceived disciplines. Faculties in modern universities are a gesture to this heritage, but each now houses a number of comparatively autonomous, discipline-based departments.

Such structures are tottering because of the multiplication and overlapping of disciplines, and the imbalance between faculties. Various attempts have been made to draw logical boundaries between the disciplines as a step towards rationalising the structure. But such attempts, we can now see, are doomed to failure. If the mapping is based on the order of generality of the phenomena being studied (cf. nuclear physics and macro-economics), then we find that at each level several disciplines are interested in the same phenomena. If the mapping is based on the form of enquiry, then we find that each discipline invokes more than one form (unless one tries pedantically to create a discipline for each possible form-phenomenon combination).

Ultimately, enquiry is interdisciplinary, and we turn aside to develop precision in this or that phase of the enquiry in order to return to the world of the living better equipped to deal with whole problems. The devoted specialist is indispensable, but he is not a whole man. Or to put the point another way, "disciplines" are merely clubs for people working in approximately the same way on related problems. When membership becomes too exclusive, or it is assumed that one has little to gain from membership of more than one club at a time, then snobbery inhibits discovery.

It is our desire at Murdoch to cultivate in students both rigour in the use of various tools of enquiry, and a lively sense of the inter-relatedness of disciplines. We want to make it possible for students to undertake programmes of study which demand advanced aptitude in one or two disciplines, along with a theme-centred spread of courses. The attempt to declare a theme for each programme goes beyond aiming merely to give students freedom to choose subjects over a wide range; it seeks to impart a sense of coherence or wholeness to the student's undergraduate study experience. Proposed programme themes of this kind include "human communication", "human development" and "environmental studies". We also see our professional programmes (e.g., teacher education and veterinary studies) as essentially thematic in character. And we see a need for interdisciplinary research into matters of urgent social and environmental concern. The question is: what administrative structures will best facilitate these objectives?

The Pragmatic of Administration: (1) The Departmental Model

Administrative structures are supposed to serve the purposes of the institution. If, however, the administrative unit becomes too large and rule-bound, or if historical circumstances change but the structures do not, then objectives intrinsic to administration *per se*, e.g., economy, conformity and the "steady state", tend to subvert the higher purposes.

Historically, the model of discipline-based departments has coloured most of our thinking about university administration. And the one unit has combined the following responsibilities:

(a) *Responsibility for staffing*—i.e., academic and support staff have usually been appointed to, and on request of, the department, and have been answerable to the head of the department.

(b) *Responsibility for courses*—i.e., on the assumption that each department represents a discipline, departments are usually responsible for designing both undergraduate and graduate studies, and faculties rarely do more than give formal ratification to departmental proposals, consistent with overall priorities.

(c) *Responsibility for research*—i.e., working from the same assumption, it is normal to look to departments for research proposals that advance knowledge in the disciplines, and inter-departmental research institutions usually have a hard road.

The net effect of this concentration of powers within the one structure is that the university becomes a loose federation of rival empires, in each of which there are tendencies to proliferate courses and to provide ones' own pre-requisites, causing duplication with what other departments are doing, and restricting the freedom of students to choose programmes tailored to their needs.

The Pragmatic of Administration: (2) The School Model

Some universities have attempted to avert the problems described above by abolishing departments and faculties and setting up schools. It is usually assumed that the schools so created represent modernised "natural" divisions of knowledge, thereby justifying their being regarded as relatively permanent structures. In each school, a group of related disciplines is governed by an appointed or elected executive, future staffing is adjudicated by a wider spread of interested parties, students enrolled in the school have more flexibility in nominating their programmes of study, and inter-disciplinary programmes of research and teaching (within the school) are easier to establish. For such reasons, Murdoch prefers a school model.

But there are still problems. The logic of enquiry is just as damaging to the view of schools so far presented as it is to departments. Enquiry, reflected in programmes both of study and research, constantly runs over school boundaries. At the pragmatic level also, schools tend, as they grow in size, to become subject to faculty-like problems of imbalance and impersonality. *De facto* departments can also develop, as disciplinarians clump together for tactical reasons.

Part of the solution could be to redesign the schools from time to time, increasing their number to control their size. This requires first that we surrender the claim to our boundaries having an intrinsic logic. But it also requires that we challenge the assumption that all three of the responsibilities mentioned above need be carried by the one structure.

Murdoch: A Multi-structural Model

Our hope at Murdoch is that we may be better able to fulfil our objectives by administering each responsibility through separate structures.

(a) *Schools*—We have committed ourselves initially to six schools. Four are general schools: Human Communications, Social Inquiry, Environmental and Life Sciences, and Physical Sciences and Mathematics. But for purely pragmatic reasons, two are based on professional needs: Education and Veterinary Studies. All six are multi-disciplinary and likely to overlap. Thus, while most of the mathematicians will probably belong to the School of Physical Sciences and Mathematics, a few will be more usefully placed in other schools. In short, schools will be administrative homes for staff, kept to such a size and heterogeneity as to facilitate discussion of general problems of university life.

(b) *Programmes*—It is intended that programmes of study will be administered by committees directly answerable to the Academic Council.[2] Programmes may be proposed by any lecturers, and will probably emanate most often from schools and from panels of lecturers working in the same discipline, but the door will be kept open for suggestions from any source. These will then be judged on their merits and staffed accordingly.

Secondly, the sequence of studies chosen by each student, consistent with the very general specifications laid down by the

[2] The senior and representative academic body, under the Senate.

programme committees, will be adjudicated by staff advisers, and flexibility will be the watchword. Especially will this be so in the first undergraduate year. Called Part I, and administered by its own Board of Studies, this year will be self-contained (even to the extent of allowing a student to terminate with a certificate), exploratory and integrative. No more than 50 per cent of his credits in this year may be reserved for pre-requisites in Part II programmes, and certain thematic, multidisciplinary courses will be provided, as well as the more traditional single-discipline courses. We are hopeful that single-discipline courses will be biased towards the themes declared in our integrative courses, and that students will elect integrative courses that diverge from what they hope eventually to make their major study. After Part I, the student will commit himself to a majoring programme, be attached to an appropriate adviser, and enrolled through the school of which that adviser is a member.

(c) *Disciplines*—What then of the traditional disciplines? Far from discouraging, say, the psychologists scattered through the schools from drawing together to promote their discipline, we shall expect them to submit proposals for future staffing and research, as well as major course sequences. Since, however, the interests of the disciplines will not be wholly contiguous with those either of schools or programmes, decisions on such proposals will be taken at an all-university level.

Also, fortunately, we will not be obliged to define what we mean by "a discipline". Apart from striving to obtain a reasonable balance in staffing, particularly in the appointment of foundation professors, we will be relying upon the academic discretion of lecturing staff to maintain their disciplines. Hopefully, because standards become everybody's business, and each of the major forms of enquiry is shared by many disciplines, we will all be somewhat more conscious of the need to scrutinise new proposals carefully, in the interests of the university as a whole.

Conclusion

Many further matters remain to be resolved in terms of our multi-structural model, such as the mechanics of honours and postgraduate programmes, the appropriate forms of student and temporary staff participation in academic government, and the best ways to distribute administrative support staff between schools and programme committees. But I trust that the fool has rushed in far enough to convey the general line of thinking. Time alone will tell whether the angels were on our side.