

THE VALUE OF LECTURES AT UNIVERSITIES:

Preliminary Results from First Year Student Surveys

DRAFT ONLY

AUSTRALIAN ASSOCIATION FOR RESEARCH IN EDUCATION

Annual Conference
Newcastle, NSW

27 November to 1st December, 1994

Geoffrey Waugh

University of New South Wales

The lecture method continues to be the most widely used method of instruction, probably the most badly used method of instruction, and is certainly the most widely criticized method of instruction, in universities. There is a great deal of literature on this subject but this is not the place for a literature survey here. Here we begin with a brief discussion of what is meant by a lecture, proceed to discuss the criticisms of the lecture method, and then present some thoughts on the value of the lecture method. We finally present some preliminary results of surveys in a first year university course.¹

The argument here is that lecturing, when well done, is a very exciting method of instruction, students are stimulated, encouraged and motivated by good lecturing, and they probably learn more efficiently when lectures are used as part of an overall teaching package. This latter conclusion may never be verified, or falsified. We do not even know how it could be tested.

However, the points we raise go far beyond this. It is not simply a contention that brilliant lecturers give brilliant lectures. We are

asking the reader to put aside, for the moment, traditional ways of thinking about teaching, where we start from, and focus on, the individual, and where we think of teaching in terms of an individual learning in a group. We do not deny the importance of individual learning, and the theoretical and empirical evidence that embraces individual learning. Indeed we fully support these traditional views: but here we are talking about something altogether different.

Here we are asking the reader to reverse the order of thinking. In the lecture method, it is the group that is primary, and from the group we go back to the individual. That is simple enough, but the consequences of thinking this way radically change the way we think about lecturing, and what we do both inside and outside of lectures. Our claim is that

the group in a lecture, through skilful teaching, can be made to react as an entity in itself, and this entity is not merely the sum of individual reactions. The effect of group dynamics is far greater than may be surmised at first thought. What is happening in a lecture is certainly not simply a lot of individuals learning individually - and it is this issue of the group as an entity itself that we wish to pursue.

In short, the answer to the often asked question, 'what is learned in a lecture?', may lie not so much in the individual, but in group dynamics. Group dynamics, the 100th monkey syndrome, and all such ramifications, are well understood amongst organization theorists; but this aspect of the lecture method, appears almost unexplored in the education literature on pure lecturing.

THE LECTURE

In this paper we give a very personalised view of lectures. By a lecture we refer to the teaching method where the lecturer talks, acts, persuades, cajoles - in fact has perfect freedom to do whatever is desired, except to ask questions (other than rhetorical ones). The students do not discuss in the lecture the information conveyed, or question the lecturer verbally. If we think about teaching as a spectrum of techniques, at the one end we may have the pure Socratic method where the teacher only asks questions, and only the student gives answers. At the other end of the spectrum we have the straight lecture with no active or verbal participation by students at all. Along the spectrum we have various forms of modified and structured lectures, tutorials, seminars, and discussion groups. It is the extreme end of the spectrum, the straight lecture with no active student participation at all, that we are discussing here.

However, we do not see this type of lecture as a one-way monologue. Considerable information is conveyed to students and back to the

lecturer other than by the words alone. The words we choose in a particular context, and the way we say the words, vary the meaning to such an extent that the totally opposite point of view can be conveyed by a simple inflexion, or a gesture. 'He is green' has no meaning outside the context in which it is spoken. In a lecture on politics this may mean that a particular politician was sick, he was naive, he was not sick, or he was not naive. It all depends on the context, the inflexion given to the spoken word, and the simultaneous gestures used. You cannot produce this effect in a text book, or with written notes. The written and the spoken word convey very different information.

Again lecturing is not a one-way flow, for even in very large groups of several hundred students, the attentive lecturer receives an information flow back from the students. The puzzled look, the sudden switch of attention to the neighbouring student's notes, the silent nod, the rapt expression of sudden enlightenment, or the glazed expression of the bored and disinterested, all tell the lecturer something. And the attentive lecturer responds accordingly to these cues, with repetition, a change of pace, a diversion or whatever. There is a danger here that the lecturer's receiver is likely to be jammed by the barrage of information that is constantly reflected back, requiring the development of a rapid filtering system to sort relevant and not so relevant information. This is the most difficult, but exhilarating, task for the lecturer. The lecture is a two-way game where the lecturer needs to keep objectives firmly in mind, wits intact and be able to think rapidly while controlling the delivery of the subject matter. It requires all the skills a lecturer can muster. The

lecturer must be prepared for as many contingencies as possible, have as many examples as possible, and be able to use these examples to either attract attention or drive home points depending on student reaction. In any particular lecture in a series very few of the examples may actually be selected and used at the spur of the moment. The overall structure of the lecture, and the series, however, always remains fixed and unchanged. But more on this later.

Lecturing is a very creative process. It is a technique that can convey and receive information in a way no other method can. The arguments about what lectures cannot do hold no sway here, whatsoever. These arguments merely point to the fact that no one teaching method can achieve all. Other methods are not substitutes for, but are complements to the lecture. But if there must remain a doubt in the reader's mind, then let him or her compare according to predilection, the grand final live or on television, an opera live or on compact disc, a symphony on tape or at the opera house, or a brilliant public lecture with reading a dull discursive textbook in private. In all of these, the alternatives are complements, although, at first thought, they may appear substitutes.

AGAINST THE LECTURE

The arguments against lecturing are manyfold.² The first group of arguments against lectures generally alludes to the sheer boredom imposed on students. These are the weakest arguments of all, and generally point to the poor lecturer who reads, speaks in a monotone, does not use personality, humour, gestures or voice control and has never thought to structure or simplify the flow of ideas. The lecture here is often considered to be a long monologue spoken indifferently by a disinterested deliverer to an even more disinterested audience who switch off after the first ten minutes. This is no argument against lecturing; it is an argument against bad lecturing. We will discuss good lecturing below, but suffice here is to refer again to the many possibilities of being creative in presentation. Excitement, enthusiasm and laughter achieve more in 10 minutes than one hour of boredom.

I can recall one of my undergraduate lecturers who for one hour would talk incessantly, without breaks or interruption. He appeared oblivious to the theatre, the paper planes or the noise, and in my more nostalgic memories I conjure up visions of the Battle of Britain. His copious notes were unstructured and detailed. When the hour was finished he would celebrate by ruling a red line underneath the sentence he had just finished. Next hour he would start again from the old red line, and proceed to a new one. Such a lecturing technique needs no comment here.

A second group of arguments is based on theories of learning, and belong to the realm of educational psychology. Students do not remember much of the detailed information presented in a lecture, and often do not successfully get the main points down during the lecture. It follows that the lecture is a poor means of communication. We have no quarrel with this statement that lectures do not ensure long term memory for detailed arguments: it makes good commonsense and is strongly supported by empirical evidence. However, lectures are not the end of learning, they are usually only the beginning. After the lectures, students learn in many other ways, by reading, by discussing, from their peers and teachers, by doing problems, by arguing both inside and outside of formal tutorials. The lecture aids this process, it defines the boundaries, classifies the material, sets the tone, is

highly motivating and stimulates students to seek answers to important questions. Good lecturing will always ensure that the important issues are clear in student notes.

The difficulty with the empirical evidence against lecturing is that it is often based on the false premise that lecturing is conducted in isolation from other teaching methods.³ More importantly, the wrong

things are tested. What needs to be tested is how well students learn with, and without, an exciting and stimulating series of lectures, not what they remember in the short or medium term from a particular lecture, often in experiment played back on a tape. Indeed McLeish in his tests of the value of lectures acknowledges that in order to ensure uniformity of delivery in his experiments he used tapes, and this cut out any use of visual material. It also cuts out any feedback from students. Penner (1984, pp 86-87) points out that there can be no scientific purpose in continuing these tests that compare tape recordings with lively face to face discussions in tutorials. This has no relevance to the classroom.

A third group of arguments generally puts the point of view that lectures are redundant. They may have been relevant before the printing press, but books and libraries give more accurate and more detailed information than lectures. A common cry is why not just hand out notes so they can be discussed in class. On this argument we merely point out that the spoken word differs from the written word, conveys different information, and there is a great deal of difference between a lecture in group of 500 students where much of the enthusiasm for the course is conveyed, and reading a dry text on 'marginal productivity' or 'locus of control' in the confines of one's study. Good lecturing changes the image, in the students' mind, of the otherwise dry text .

The fourth group of arguments generally relates to individual differences in students.⁴ A lecture is concerned with group learning and not individual learning. Individual differences can only be overcome by dealing with the individual. There is, of course, a certain validity in this argument, and the greater the spread of individual differences, the more difficult the lecture method becomes. What is generally overlooked by those who use this argument is that the individual is not the only starting point. This concept of the individual is peculiarly Anglo-Saxon - the same concept does not arise in Asian culture, European culture or south Pacific culture. That the individual is primary and society, or any other sub-group, is secondary remains unproven in this context. It is a reasonable starting point, but its not the only one. Our language, our custom and our culture did not come from the individual, and there is no reason to expect that anything must be exclusively taught on a one-to-one basis, or as near to it as we can get. Most of what we have come to know and feel we learnt as part of society - a group if you like. (Waugh, 1994).

FOR THE LECTURE

If we accept the group (the lecture group in this case) as primary then we must learn to emphasize the things that bind the group and not the individual traits that split the group. Now what these binding things are will vary through time and place. In the students we teach in first year university there are many things which bind them as a group,

not the least of which are that they are all doing our subjects, are invariably interested in music, films and television, like to laugh and enjoy what they are doing, and, importantly, want to pass at the end of the year. It is this binding that produces a group 'personality' that cannot be accounted for by the sum total of individual reactions.

Indeed, active participation within the lecture may even impede the group reaction. No formal studies are readily available to allow us to appreciate what is happening here. The role of the lecturer is, in part, is to keep the group together, and to bring subgroups back into the mainstream as they form from time to time.

It is difficult to get across the point we are trying to make here, for so entrenched are we in the individual that to begin from the group requires a total reversal of thinking, despite the obvious point that the adolescents we teach have learned their culture as a group. Indeed, throughout history, political leaders, good or evil, have never been fascinated by individual learning - they know the group is all. Successful propaganda is for the masses. Good lecturing requires attention to the group in the first instance. In short, individual differences need to be handled outside the lecture, and the lecture used to motivate students to change student behaviour, or to have desirable behaviour reinforced, as part of a group.

Advertising, for example, does this very effectively. Target audiences are captured through the creation of images. No individual in the group decides the fashion, but somehow the group does decide on what to do, wear, eat, drink and see. No individual makes these group decisions, but everyone in the group behaves in a similar way. In lectures it is this difficult-to-define 'atmosphere' or image that is all important: it is an image about the subject, the material and the lecturer that transcends the individual. An individual responds in a certain way because of the group. Decisions and feelings are collective ones.

Contrast this to our traditional attitude to teaching. It is the individual we traditionally attempt to change. What matters is how the individual has learned, understood and absorbed the subject matter. We test the individual at the end of the course and decide whether individuals have passed or failed. However, in practice the individual would not, in general, be able to pass that examination 6 months on, and in some cases 6 days on. The individual has learned other things that transcend our testing, and these other things can be marshalled in a lecture to improve performance in examinations. What we are suggesting here is that the transfer of detailed knowledge need not be the immediate objective in large-group lecturing. That the individual must learn and pass at the end of the year is still important; we have to allow for individual differences and test individually as well, but in a different environment. Something else is happening in a large

group, and that something else is more concerned with the group than the individual.⁵

The lecturer is creating a new environment, a new landscape. For the individual at the lecture this landscape is just there, and exists only because it is accepted by the group. Every one who attends the series of lectures absorbs and accepts this experience. There is no sense in the individual questioning, evaluating and accepting or rejecting. If the individual comes to the lecturer, that individual is part of the new environment and is absorbing images from it. Outside the group the individual can challenge and evaluate the ideas - but inside the group, at the lecture, the individual is just part of what is there and has no control. This not to say that learning to challenge ideas is not part of the lecture material - it certainly always is in a good lecture series; but in this case the learning to challenge simply becomes part of the the group response, the image, the atmosphere.

We can again attempt to draw a parallel here with a television advertising. The market strategy is based on the characteristics of

its target audience. If you watch, and you are part of that target, then you just absorb the images. There is no point in evaluation, in saying the images are wrong. The image itself is arbitrary. As part of the group, adolescents accept the image of Dr Martens or Reebok or Coca Cola: the images are not right or wrong, they are just there. Ethical questions and concerns of morality are a separate issue. A viewer is just part of the imaginary landscape. Outside the group one is in a position to act, and can reject, challenge or accept accordingly.

Language of course has a similar characteristic. There is no point in questioning language. A rose is a rose, and the word is just there. Society has given us that word and no members of the group call it something else. It could have been called something else, it is an arbitrary decision, and there is no link between the word and the object. How we use it as an individual is a separate issue again. We may never use it, but it remains part of the language of the group, and is carried with the individual. In language it is the group which is primary and the individuals, who use the language, secondary.

We wish to take this analogy with language a little further. '[The] speaker must have [the system of language] internalized before he can even begin to speak. A speaker who knows how to speak only those words which he actually does speak can hardly be using language..to bear information. His utterances would be more in the nature of a bird-call. As modern information theory shows, the information content of a signal is directly proportional to range of possible signals that have not been selected.' (Harland p126). If more than words are being conveyed in a lecture it is very difficult to test the value of a

lecture by asking what is recalled, because the value of what is recalled in the test depends on what is not selected; to test the value of the lecture we have to know what is recalled and what is not recalled, and what is not recalled are the images, feelings, atmosphere and other things conveyed by the lecture, and these things rest collectively with the group. Perhaps we are stretching the analogy too far, but if there is truth in our argument, and we believe there is, it becomes very difficult to evaluate a lecture by a simple test of recall.

The general point we are trying to make is that questions of individual learning and remembering detailed material, the moment an individual has been told it in a lecture, cannot be the main objective in a lecture. There are clearly better ways of acquiring that sort of information. But knowing the material is available, wanting to classify in the mind, having feelings and questions in the unconscious, feeling excited about the material, and being inspired to research further the subject matter, are all part of the realm of a lecture. And all these things are contagious: they, in some cases, exist only because of the group, and in others the experience of them is heightened because of the group. We will refer to the 'atmosphere' of the lecture. It is a group characteristic and, like language, is planted in the individual, but only because this is accepted by the group. In lectures the atmosphere has been created by the lecturer who is not part of the group.

In the Asian culture this acceptance of group knowledge and behaviour patterns is well known. 'A teacher for a day a, teacher for life.' There is no possibility of disagreeing with the teacher. What is said is correct. This is why Asian students tend not to ask questions in a group: to do so is an affront to the teacher, and may well imply either that the lecturer has been unclear, or is wrong, or worse the student did not understand and so loses face. The loss of face is

entirely a group concept. One cannot lose face as an individual. (see for example Ballard and Clanchy,1992). There is, in the Asian culture, a very well defined attitude to group learning. This is not to say that individual learning is not important, simply that the individual is secondary to the group. The group accepts that all wisdom resides in the teacher, and this acceptance modifies and moulds behaviour of students

If this point about the dominance of the group is accepted in general, then the lecture has quite a unique role to play in education. It is not the tedious passing of information from one person to another that has importance, although that does occur in the lecture. It is the binding of the group together to provide an accepted culture, and the creation of a lasting impression in the the minds of all individuals in the group about the subject matter and the insights this knowledge

brings. These impressions can change behaviour, attitudes and subsequent learning ability, without any active learning within the lecture itself. If this particular argument is accepted, the consequences for the delivery and value of lectures are radically different from the orthodox view.

A personal anecdote may help here. Several years ago I went to hear Richard Dawkins give a lecture in the Australian Museum in the Superscience Series. I had previously browsed one of his books, *The Selfish Gene*, and was interested to hear the man himself. He spoke for about 50 minutes, I recall. He was charming. The audience were spellbound and the structure of the lecture was elegant in its simplicity. The audience listened when he wanted them to, laughed when he wanted, and were attentive throughout. Several years on I can still recall the structure of that lecture. He started from a description of the characteristics of viruses, moved on to computer viruses which have in some ways similar characteristics, and then proceeded to speculate about the possibility of mind viruses that would account for disruptive and dangerous behaviour in individuals. I was motivated to read each of his books, and from them learnt a little of biology, evolution and genetics and a considerable amount about the way Dawkins thinks. Of course I may have done all this without hearing him, but I doubt if it would have been with the same enthusiasm or interest. I have subsequently listened to Dawkins on tape, and although I enjoyed what he had to say, I never felt as exhilarated as during that one lecture; the atmosphere was not the same. Nor can I recall the content, or even the subject matter, of those tapes.

To have tested the audience on simple questions of what or wasn't said in this lecture trivialises the whole experience, downgrades the lecture, and reduces excitement to boredom. The test here would have the same impact as an attempt to photograph a spectacular, panoramic view of snowcapped mountains and lakes: the magic of the moment is lost instantaneously, and forever. The role of the lecture transcends these simple tests. The tests prove very little at all. We test in universities only so we can give a bit of paper to successful candidates, not to teach. After all, students do not get to see or discuss their examination papers again. From an educational perspective it is what is left after they have forgotten the test that is important .

Frederick Mayer put the issue this way:

A great lecture is as significant as a brilliant symphony. When it touches the hearts of the imagination of students its has lasting value..... An inspired lecture gives color to the experience; it heightens the sensations of the moment. Students experience what Aristotle call a catharsis, a projection of individuality into a

universal realm. (Penner, p 66)

We lesser mortals may never hope to achieve such heights in lectures. But that it to say that we cannot all hope to become Greg Normans or Cathy Freemans. However, anyone who has played a round of golf, or who has run a race, knows the exhilaration of a better than average play. And so it is with lecturers. Minor successes spur us on and give us hope. Further, we have an impact as role models that we never test, see, or get to know about. How many eight, nine or ten year olds are hurtling down legbreaks in the local park somewhere in Australia or beyond because of Shane Warne? A very superior one-way, large-group lecturer indeed.

The question of what is happening in terms of group dynamics in a lecture appears to be an unexplored topic. For the new lecturer there are many excellent books available on teaching.⁷ However, most of them, if not all of them, have a single theme of splitting the lecture and seeking active learning by individuals by some form of discussion groups or structured lecture. We are at pains to point out here that we have no quarrel with these views. However, it is clear from marketing specialists and from organization theorists that group dynamics have an important role in the market place and the work place. It almost follows axiomatically that it will have an important role in the lecture. If so, controlling these dynamics, whether active learning takes place in the lecture or not, ought to lead to better active learning outside the lecture.

Let us summarize our claims about the value of a lecture. The lecturer is creating an image for the group. This image exists in the minds of the group, and represents a new landscape through which the group has been led by the lecturer, lecture by lecture. Part of the image is that of the lecturer herself, part provides new views of reality, and part provides a structure about the way the relevant information, the course material and the world are linked. Altogether it provides a new experience and new insights into reality. This image is accepted by the group, although no one student decides to accept. The image is just there. Its impact is heightened because of the group. How the group responds to the the lectures, the images, and the lecturer is not determined by each of the individuals. Like the decision to buy and wear Dr Marten's, no one individual has decided, but group decisions are made. The success of a lecture series is not whether individuals have learned more in a good series of lectures (although they may well do). The success of a lecture series depends on how well students learn both during and after the lectures.

SURVEY

If a successful lecture series is providing some degree of collective mental stimulation then there should be evidence of that in student surveys. We believe there is if we look for it. We shall take a group

of surveys from one lecturer over a four year period. The lecturer released these surveys with some hesitation, and wishes to remain anonymous. But suffice is to say that they were lectures in an Australian university, they were first year lectures, and the group size was 700 to 900 students. They were successful in the sense that students thought they were successful. The applause after each series would continue even after the lecturer left the auditorium. The statistical responses and written comments support this response. The approval rating, shown in Table 1, was significantly higher than the norm approval rating for smaller size lectures of less than 50 students.

TABLE 1

STATISTICAL RESPONSE

1990 1991 1992 1993

Lecture Approval Rating 93% 97% 92% 88%

Lecture Disapproval Rating 3% 1% 2% 2%

Norm Approval Rating 70% 70% 71% 72%
(small groups)

Norm Disapproval Rating 17% 17% 17% 15%
(small groups)

If what is said in this paper is true, certain types of comments ought to show up in student appreciation of a successful lecture series. We will try to classify the student comments on these series, but we recognize the subjectivity of both the classification and the allocation of responses to the appropriate boxes. Let us try to give an appropriate classification of what we would hope to find.

Atmosphere in the classroom. A happy relaxed atmosphere that inspires students is difficult to define. It is critical to an overall strategy in teaching that just the right atmosphere is created in the class. Students must like the subject, the lectures, the classes, the lecturer, and feel enthusiastic about the tasks before them. Ideally they must want to be in each class, they must feel that learning can be, and is, fun. This requires the creation of an atmosphere that is happy and relaxed. A few students come with this view already: the role of the teacher is simply to reinforce their preconceptions. Others come with less favourable preconceptions; here the role of the teacher is to create a new experience and new environment for these students. The latter provides a more difficult task in the large lecture. However, unless the right environment is created, little or

no learning can occur.

This atmosphere is a group response. It is not the sum total of individual experience. It exists because of the group, and is heightened by the experience of the group.

Structure and clarity. Lectures should be structured, and explanations clear and concise. Material needs to be organized into a pattern. Each lecture or class must form an integral part of that pattern, and students must feel they are taking a journey through a new landscape. At each stage they must know where they are going, where they are, and where they have been. The first class points the direction and conveys some of the enthusiasm. The last cements the whole pattern, and leaves the students with both a sense of fulfillment, and the knowledge that they have learned a lot, and have had a good time.

Again it is the group that is travelling this path, and the imaginary landscape exists in the group mind, and the knowledge that others are travelling this path is part of the excitement and the evolving feelings as the journey continues.

Learning and information content. Students must feel they are learning, and that lectures and classes are worthwhile. Being happy, enthusiastic and content, is part of the strategy, but it is a means to

an end, and not an end in itself. Students must be learning, and know that they are learning at each stage. They must feel that they have walked out of each lecture having learned something new, they must have new questions left in their minds, and they must know that there is a lot more to come.

This learning experience is the motivation for joining the group in the first place. The knowledge gained is what is left after the journey is completed. But it is not the journey itself. Something else is happening along the way, and this something also motivates students and improves the retention of knowledge so acquired, and subsequently acquired.

Lightheartedness. There should be just the right balance of seriousness and lightheartedness. Lectures must be both serious and fun. A lot of hard work is to be done and there is little gain unless the task is completed. Students have to prepare for an examination, and they want to learn at least enough to pass that examination. Both students and teacher want more to be learnt than just that. All of this can be most easily accomplished if the class is fun, as well as a lot of hard work. This walking of the tightrope between fun and hard work is one of the real skills of the serious teacher. It is this balance, together with the timing in delivery of the really important points,

that is the secret of maintaining student, and teacher, concentration. Too far on one side or the other, and the teacher and the class becomes lost in a wilderness.

The hard work may well be the task of individuals. But the fun and the laughter along the way are group responses and are heightened by the extent to which the group joins in. The hard work is made easier because the fun is shared with the group.

Relationship to students. The students should feel that their lecturer is always accessible and concerned about their progress, and is an inspiration to them. The teacher is more than an instructor. There is an instructional role to play, but there are human relationships involved as well. There are many who say that teaching is all relationship between pupil and teacher; indeed Herman Hess wrote a number of novels about this relationship, exploring the complexities in great detail. It can never be forgotten that the teacher is not teaching economics, or mathematics or chemistry, but the teacher is teaching and helping people. However one defines teaching, successful teaching involves a complex interpersonal relationship between students and teacher. Hight (1951), in what must remain as one of the finest works on teaching, makes much of this issue.

The role of the teacher as a mentor is difficult to define, but it is surely the individual relationship between the teacher and the group, and can exist even when the two have never met.

Breaks in classes. Periodic breaks in lectures improve attentiveness and help develop the ability to concentrate. Students rarely come equipped to concentrate for the full class period. Successful television producers and radio commentators know well that people have a very limited attention span. The secret of success lies in the ability to control when the students are concentrating, and when they are not. If the lecturer can control the timing of student attention, then he or she can feed the important material during those periods. Successful breaks in lectures, at short intervals, are a means to that control.

Providing breaks is a technical aspect of teaching. Good teachers do

this unconsciously. But greater success can be achieved by using it as a deliberate strategy. It further heightens the group responses, and overlaps with the atmosphere category.

Relevance and illustrations. Illustrations need to be ones with which the students can identify. Material can most easily be understood and remembered if examples are relevant and interesting to the students. Devising these examples is often a very difficult task for those of us who come from a different generation. Our students all look so young,

and were borne in a different age. Still we must try to put the material in a way that is relevant to their generation, not just to ours, and not just to our own research and intellectual pursuits.

Again this is a technical aspect of teaching. But again, by choosing examples directed at the group, the teaching helps bind the group and greatly improves the 'atmosphere' in the lecture theatre.

Delivery and motivating students. The delivery of lectures should be aimed to interest, stimulate and inspire students. The delivery of a lecture must combine all these attributes. The aim is to create an atmosphere that is tempting to the student. Each lecture series, and each class or seminar, must be structured, the delivery must be both lighthearted and serious, and the delivery must be such that the students relate to the material and the teacher, with the teacher controlling the students' attention span. We can only try to do these things: but if we do, we can interest, stimulate and inspire students. Teaching and learning are fun!

In a very real sense this category overlaps all other categories. And yet it is sufficiently important to demand a category of its own. In the end, if lectures are successful they must be well delivered, and must motivate and inspire students to learn beyond the lecture.

The classification of the comments and written responses is shown in Table 2. In some cases, the words chosen by students make it easy to categorize. In some cases specific reference to atmosphere, learning, structure, inspiration, examples made such classification easy. In other cases some judgement had to be exercised. Some examples will illustrate the point:

ROBERTS ! Simply BRILLIANT! Most refreshing, a satisfying academic quality coupled with the amusing, relaxing, amazing mood he generates making it immensely enjoyable and a pleasure to attend. Wish we had more lecturers who had his style, speed, method, ideas and general perspective. He deserves a standing ovation and a gold medal for being different.

This clearly fits into atmosphere, but it also relates to information content, so it was marked into both. But what are we to make of the following:

I've attended a number of different series of lectures, and this series would rate possibly as one of the best. I am one of those people with the opinion that lectures are a poor means of gaining information, and as a result place more emphasis on attendance at tutorials than lectures. However, the series conducted by Alan Roberts is definitely a worthwhile experience. It was easy to tell he had done a lot of research into the pros and cons of lectures, and built each of his lectures around his findings. Many other people conducting lectures at

this university could benefit not only themselves, but more importantly their students, by using some of Alan Roberts methods.

The fact that this student refers to the experience and to information meant that we again categorized it in two boxes. The next six comments were all categorized under atmosphere.

He left a fantastic impression on me. I would love to attend his lectures all over again !! Made this subject truly more interesting than I ever would have imagined !! Very approachable.

For two hours each week I was dazed into the notion that this subject could actually be interesting. Quite an achievement.

Alan has been a wonderful lecturer - both entertaining and clear about his lectures. I have never in my whole academic years enjoyed such lectures. His lectures are precise and straight to the point. Keep up the good work Alan. WELL DONE !!

Having already been at a University for 4 years I found this course to be the best presented and organised I have attended. All in all a very enjoyable course and highly relevant to our everyday life - Thanks.

I found the lectures given by this lecturer were fun, informative and achieved what they set out to do - impart maximum information in minimum time in an INTERESTING WAY. Congratulations on being the best lecturer I have had from the faculty yet.

A couple of these words come to mind. Fantastic, Amazing, Phenomenal, Incredible, Brilliant, Outstanding, Mindboggling, Lush, Supreme. It really got the juices flowing.

The first also mentions approachability so was also classified under relationship to students, the third mentions precision and so was also classified under structure and clarity, the fourth mentions relevance to everyday life so was also classified under relevance and illustrations, and the fifth also mentions information content and received the appropriate extra classification.

I have attended a few universities and a number of lectures. So far this is the most 'enjoyable' lectures I have had. The lecturer's method of teaching (+music, etc) had somehow made me want to read and understand the subject. For your info., I used to hate this subject.

This comment is clearly under motivation, but the use of the word 'enjoyable' suggests something about the atmosphere. So again it is under two categories.

His lectures were interesting and informative in that it made you say 'Hey, I learnt something new' at the end of the lecture. His enthusiasm for the subject cannot be overstated.

This comment is clearly under learning and information content.

Humorous comments used during lectures were helpful in giving a break in concentration and enable better concentration overall through the lecture series. Also helped when studying in recall if funny stories can be recalled and linked to subject matter.

This is definitely classified under breaks in lecture, and also lightheartedness. It is interesting to note the number of students who really understood the lecturers techniques, more students than one might expect.

Alan Roberts was extremely well organised and made what could have been another dry topic, quite interesting. The lecture notes I took were far more useful than any others taken.....and I'd prefer he lectured all session (He'd probably object to this!). Moreover recent examples and stories always go down well and adds interest.

Again classified under structure and clarity, and also under examples and illustrations

The lecturer was very good. He kept everyone interested, and had the most control over the group that any lecturer I had had. To be specific simply amazingly amazing. His musical taste and knowledge isn't too bad either.

This is difficult to classify but it was felt it was directed at the atmosphere because of the reference to control and interest in the group.

I found Roberts the most pleasurable lecturer of all. Personality combined with periodic internal breaks created an environment enabling very effective lecturing and appreciation by students. This not only generated interest but made attendance worthwhile and subject matter interesting. I would like to be lectured to again by Roberts.

Definitely classified under both atmosphere and breaks in lectures.

Roberts gives 100 percent each time and coming to the lectures is very worthwhile. The atmosphere is relaxing, the jokes are even funny sometimes, but most of all the music, something probably every one can identify with.

Again classified under atmosphere and lightheartedness.

This was the only lecturer I walked out of knowing I had learnt something. GOOD WORK ROBERTS !! It is nice to have someone who knows what they are talking about and remembers they are speaking to students who have never done this subject before.

Classified under learning and information content, the student clearly believing that he/she had learnt from the lecture.

Roberts was one of the best lecturers I have come across. He worked through the lecture in a wonderful way in which I perfectly understood every part of the topics he taught. He also made the lectures exciting, interesting and entertaining.

This was classified under atmosphere, because of the reference to excitement, interest and entertainment. But it could have been classified under structure and clarity. An arbitrary choice.

If possible I would truly love to attend Alan's lectures in another course He is funny, kept the class attentive and still provided our notes with adequate data concerning subject material. This balance makes his lectures truly worthwhile.

Classified under information content and under lightheartedness, but could have also been put under atmosphere.

Mr Robert's lecture was clearly outlined and explained. He clearly explained the graphs and certain difficult areas with examples. He

also made the lecture more enjoyable and he was easy to get along with.

Mr Roberts is a very approachable man and this is very much appreciated. It made sure that there was no division in the lecture and we treated each other as equals.

This is a difficult one to classify. It was put under relationship to students, structure and clarity, and relevance and illustrations because of the reference to examples. It was also put under atmosphere because of the reference to keeping the group together. It is very interesting that the student notice this point at all.

[This subject] is not the most scintillating of subjects - its a bit dry. Mr Roberts made attending lectures far more enjoyable. Mr Roberts relates really well with people. He gets them to do what he wants them to do, without causing an adverse reaction from the students. Again difficult to classify. Certainly it goes under relationship to students, but was also put under atmosphere because of the comment about controlling people - an arbitrary decision.

His lectures differed from other lectures in the sense that he tries to make them interesting..... he does have a really unique way of presenting his lectures. The music break is a very interesting idea.

We NEED the break. It is not only to give our hands a break but also allows us to look through and understand our notes. His speed is also suitable for an average student.

Again difficult to classify. It was put under breaks, but also under atmosphere because of reference to interest and unique presentation.

Fantastic lecturer who made even this subject interesting, even if it was because of his other idiosyncrasies. At least he gave everyone something to talk about. Additionally he set things out in a logical, ordered manners which made it really easy to take good notes.

Classified under structure and clarity, but also under atmosphere. The reason for the later is that we are concerned in this group with image, and the lecturer is part of that image.

The lecturer was: charming, pleasurable, thrilling, blissful, appetizing, gifted, tantalizing, marvellous, fantastic, inspiring, entertaining etc.

For the reason given above this was classified under atmosphere

The lectures are great. You don't want to miss out on them. They are worthwhile and his methods are great. Especially the music, it increases our concentration. Basically the best Lecturer.

Classified under breaks in lecture, but could have been put under atmosphere

I find Alan to be my best lecturer. He keeps attention rate high with his intervals and makes the subject enjoyable. His use of graphs and explanation after we have copied them is excellent. I only hope my future subjects will have lecturers like him. Excellent depth in explanation.

Classified under both breaks and information content.

Roberts was an entertaining lecturer that kept up all interested. His lecturing style is unique which made the lectures more enjoyable. He gave us good, although demanding, information.

Classified under both atmosphere and information content.

I found Mr Roberts lectures a pleasure to attend. He found the right mix of entertainment to enable students to focus on essential material

when he was speaking. However, this is not to say he neglected his lecturing duties, they were met in full and very comprehensively delivered. I would personally like to attend more lectures that he gives, as his notes are complete and he is a very funny man. Mr Roberts, don't change your methods for anyone because us student know what works and your methods do! Congratulations.

Very difficult to classify because student is clearly referring to the overall technique. It was classified under lightheartedness and under information content. Quite an arbitrary decision.

Loved the music !! Really enjoyed Alan's lecturers.
We'll miss you Alan

The last was classified under relationship to students. It is one of the greatest fallacies of teaching that you can't development a good relationship with students in large groups. There were about 750 comments over the four series, of which the above are representative. Clearly the classification of these comments must be subjective.

TABLE 2

CLASSIFICATION OF COMMENTS

1990199119921993TOTAL

Atmosphere127102152145526

Information Content38373838151

Breaks in Lectures18215842149

Lightheartedness35163938128

Structure and Clarity35282316112

Delivery and Motivation1415201362

Relationship to Students1010241660

Relevance and Illustrations344314

The classifications are shown in Table 2. What stands out clearly, no matter how subjectively these results were classified, is that this nebulous concept of atmosphere was the thing that attracted the students. Now this atmosphere is certainly a group thing. But the medium is the students themselves.

A long way behind atmosphere are information content and breaks in lectures. Students were there to learn and they clearly felt that they were learning: it was number two on the list. Students have also responded well to short periods of instruction broken with, what clearly they found as a group, entertaining rest periods. In fact humour and the nature of the short diversions is strongly endorsed by students. The fact that students did comment on this clearly indicates

the impact that the breaks had, and again this is a group response.

Some elaboration is needed here to make the point. The breaks were anywhere from 10 to 30 seconds several times during the lecture, and 2 to 3 minutes once during each of the lectures. The lecturer comments that the attention of students is markedly increased after each of the breaks. The short breaks consisted of asides often related to the life of students or lecturer. The longer breaks consist of music, or slides for a planned diversion; generally, but not always, these were tangentially related to the lecture, or the life of the student or the lecturer. It is very reasonable to assume that in each case these breaks contributed to the other categories, particularly atmosphere and motivation. We see this category as largely a group category.

Structure and clarity are also strongly endorsed, as are lightheartedness and humour, the relationship to the students and the delivery and motivation. Surprisingly, relevance and illustrations brought forth the least comment.

CONCLUSION

The argument has been made that the lecture can play a very important role in a teaching package. Very preliminary and somewhat subjective student evaluations support this. The collective response rather than individual response is arguably important. To understand this argument we must reverse our normal way of thinking: the group is primary, with the information that is carried away from the lecture being, in part, group information. The individual is secondary. What students display in examinations or elsewhere assumes a different quality because of the lecture series, quite apart from the fact that they may have learnt more both inside and outside those lectures.

If we accept that the group is dominant, then we must accept that the role of the lecturer is to create an image or an atmosphere, to structure the course content and provide information on the course, and to build a strong relationship between the lecturer and the group. As lecturers we can do this by leading the group carefully through the new landscape that we have created. We can do this more successfully by emphasizing the structure of the series and the structure of each lecture as we go, by providing creative breaks in the lecture based on

the minute-to-minute feedback we are getting from the group, and by the creative use of humour.

Other important aspects of teaching such as the need to take into account individual differences, more specific accounts of long and detailed arguments, differences in background information, and so on, are not seriously tackled in the lecture. These things and others are relegated to the many other teaching methods available.

We have chosen to discuss only the straight lecture method. In very large groups of five hundred or more it is the only practical method available, and there is no denying that it takes a lot of effort to make it work well. The larger the group the more exciting, and the more useful, is the lecture method. However, as we reduce the size of the group down to say 50 students, modified lectures can be used as we move towards the Socratic position. The arguments we put then carry less weight because we can now question, get students to participate more and generally get students doing all the things that are not practical in the large group. We lose some of the atmosphere of the lecture, we lose some of the techniques that can be used in large lectures, we lose a valuable way of inspiring students, and we lose

some of the excitement. But we may gain in other ways through individual learning. Our arguments are not negated, the group is still important, but not so important. The smaller the group the less useful is the lecture method, and the more the individual is important. The converse also applies: the larger the group the more important the lecture method, and the more the group is important.

It is our strong contention that if we deny the lecture method, and the group, we are foregoing an important, efficient and economic method of learning in universities. We do not deny the efficacy of individual learning. However, it is emphasized here that lecturing involves developing a group 'personality' that has a life of its own, and this cannot be accounted for by the sum of individual reactions. We recognise we may have exaggerated the case, but that is part of the art of persuasion. However, we do not ask others to think in our framework if they prefer another.

REFERENCES

- Ballard, B., & J. Clanchy, 1992, Teaching Students for Overseas, Longman Cheshire, Melbourne.
- Bligh, D., 1974, What's the Use of Lectures, Penguin.
- Brown, G., 1978, Lecturing and Explaining, Methuen, London.
- Clererhan, R., 1992, 'Don't Bother to Take this Down: What Are

Students Doing in Lectures?' in M. Parer (ed), Papers Presented at the 18th HERDSA Conference, Monash University, Gippsland.

Clererhan, R., 1994, 'Yes and No: What Value Lectures', HERDSA News, 16 (1), 10-11.

Gibbs, G. & Habeshaw, T., 1989, Preparing to Teach, Technical and Educational Services, Bristol.

Gibbs, G. & Jenkins, A., 1992, Teaching in Large Classes in Higher Education, Koran Page, London.

Harland, R., 1987, Superstructuralism: The Philosophy of Structuralism and Post-structuralism, Methuen, London.

Highet, G., 1951, The Art of Teaching, Methuen London.

Laurillard, D., 1993, Rethinking University Teaching, Routledge, London.

Penner, J., 1984 Why Many College Teachers Cannot Lecture, Charles C. Thomas, Illinois, USA.

Waugh, G., 1994, 'The Loneliness of the Long Distance Lecturer', HERDSA News, 16 (1), 8-9.

1. I would like to acknowledge useful discussions with Dr John Lodewijks, Andrew Lo, Professor Ronald Bewley, Christine O'Sullivan and Dr Russell Waugh. The usual caveat applies, possibly more strongly than usual. The views are entirely my own.

2. John Penner (1984), gives a very good summary of the type of argument used to dismiss lecturing. He quotes Charles Glickberg as 'lectures are a purgatory of boredom', John McLeish experiments where students listened to tape recordings, and of course the extensive work of Bligh who purported to show that lectures were satisfactory for transferring information, but not for stimulating thought or changing

attitudes. As Penner is at pains to point out many of the experiments were conducted with bad lecturing. Nevertheless, the conclusions could still hold. The point we are making here is a different one. To test what is being said here, student behaviour and thought processes must be compared using a blind test when good lectures are combined with other teaching techniques. We do not know how this could be done.

3. Dianne Laurillard (1993) is very critical of the lecture method. To her they are neither interactive or adaptive, and they put all the work on students. She, in our view, makes an error in treating lectures in isolation from other methods, and makes little allowance for any creativity in the presentation of material.

4. Rosemary Clerehan (1992, 1994) makes much of the individual

differences as well as the difficulties in note taking. However, she qualifies her analysis by pointing out that much can be done both inside and outside the lecture to overcome individual differences. Our feeling is that in a straight lecture individual differences are a drawback, but if the lecturer looks for the things that bind the group, individual differences can be left to tutorials. On the note taking issue, this requires very clear lecturing for the main points, and the tutorial system coupled with a text can be used to handle the rest.

5. Donald Bligh appears to be the most often quoted source of arguments against the lecture method. In the introduction to his book *What's the Use of Lectures* (1974), he makes few of the strong claims attributed to him. He is as pains to establish that the lecture method may be effective as a means of transmitting information, and should be used in conjunction with other methods. The criticism we have of Bligh is that by the end of the book he has completely demolished the lecture, despite his introduction.

Two difficulties immediately stand out. The first is that group dynamics, as is perceived in this paper, remains unexplored. It seems a curious, and in our view an erroneous, conclusion that lectures cannot be used to stimulate thought or change attitudes. The evidence from casual empiricism is so strongly overwhelming, that one must remain puzzled by the reliance on the simple methods that he used to draw such a strong conclusion. The second is that it greatly oversimplifies teaching in general and the lecture method in particular to forcefully argue that the lecture method must be used in conjunction with other methods. Of course it can be no other way: how could you set about preventing students from learning outside the lecture? As in most of studies on lecturing, Bligh overlooks the fact that learning only begins with the lecture.

6. Richard Harland's book on structuralism is chosen deliberately here, for it is this philosophy that has at its fundamental belief that society takes precedence over the individual. Linguistics holds a special and central place for the structuralists because, it is argued, thoughts must exist in words, and these words are given to us by society.

7. Graham Gibbs & Alan Jenkins, *Teaching Large Classes in Higher Education* (1992), provide an excellent series of papers on methods to use to break the group to provide active participation within the lecture. Graham Gibbs & Trevor Habeshaw, *Preparing to Teach* (1989) again provide a series of interesting ways to get students to participate in classes. In neither study is group dynamics discussed in detail. George Brown, *Lecturing and Explaining*, (1978) does make much of psychological aspects of teaching. Especially enlightening is his discussion of rooms, shapes and sizes. The latter has very important repercussions for group dynamics. A full study of group dynamics by educational psychologists remains long overdue.