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Geoffrey H. Waugh
University of NSW

Russell F. Waugh
Edith Cowan University

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THE VALUE OF LECTURES IN TEACHER EDUCATION: THE GROUP PERSPECTIVE

Geoffrey H. Waugh and Russell F. Waugh

University of NSW Edith Cowan University

ABSTRACT

This paper proposes the use of a model of large student lectures in teacher education programmes to emphasize the group perspective, rather than the individual perspective, during lecture presentation and which complement other types of instruction such as tutorials and seminars. The model involves eight variables, manipulated by the lecturer that contribute to a good lecture series with more than 100 students. These are: atmosphere in the lecture hall, structure and clarity of the lecture, the learning and information content of the lecture, lightheartedness during the lecture, a personal and helpful relationship with the students, arranged and interesting breaks during the lecture, relevant illustrations and examples to the students, and a motivating and stimulating delivery to the students. Data from an Australian university support the model.

THE VALUE OF LECTURES IN TEACHER EDUCATION: THE GROUP PERSPECTIVE

As universities in Australia face strong competition and accountability, teacher education is strongly reliant on the lecture method of instruction. Teacher education programmes have to be delivered in a cost efficient way and the lecture method is one way of doing this. However, the lecture method continues to be the most widely criticised method of instruction by students and is probably badly implemented in many teacher education programmes. This paper proposes a good lecturing model for teacher education and bases this on evidence from students of a top-class lecturer at an Australian university.

There is a great deal of literature on lecturing and lectures (see for example, Bligh, 1972; Brown & Atkins, 1988; Cannon, 1988; Chalmers & Fuller, 1995; Dubin & Taveggia, 1968; Elsen, 1969; Gibbs & Habeshaw, 1988; Laurillard, 1993; Lee, 1967;

Maltby, 1995; McKeachie, 1967; McKeachie & Kulik, 1975; McKeachie, Pintrich, Lin & Smith, 1987; McLeish, 1976; Newbie & Cannon, 1991; Penner, 1984; Peper & Mayer, 1986; Ramsden, 1992; Samuelowicz & Bain, 1992; Verner & Dickinson, 1967; Wittrock, 1986). These studies and reports have a focus on the individual and ignore the group effect of lectures. This paper focuses on the group effects of lectures and group learning in lectures, provides a model of good student lecturing with large classes, and presents some data collected over a four-year span in relation to a good lecturing model.

Lecturing, when well done using a group focus, can be a very exciting method of instruction; students are stimulated, encouraged and motivated by good group-focus lecturing, and they can learn more efficiently when lectures are used as part of an overall teaching package. However, the reader has to put aside the traditional ways of thinking about teaching and lecturing; the traditional ways of focusing on the individual in regard to teaching (lecturing), learning and assessment of the learning and think of teaching (lecturing) in terms of individuals learning both as a group and within a group. In the lecture, 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.

What is the lecture?

A lecture is a teaching method where the lecturer talks, acts, persuades, cajoles; in fact, has perfect freedom to do whatever is desired, except to ask students to answer questions. 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 students give answers. At the other end of the spectrum, we have the straight lecture with no active or verbal participation by students at all. Within the spectrum, we have various other forms of modified lectures, tutorials and seminars. It is the extreme end of the spectrum, the straight lecture with no active student verbal 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.

Good lecturing is not a one-way flow from the lecturer to the student, even when the students do not ask questions, 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 uninterested, all tell the lecturer something. 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 coming from the students, requiring the development of a rapid filtering system to sort relevant and not-so-relevant information. Initially, this can be difficult, but it is also an exciting and 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.

The good lecturer must be prepared for as many contingencies as possible, have many examples ready to use 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, 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. So good lecturing is a creative process. It is a technique in which information and interest is conveyed and received in a way that is different from any other method.

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 things. Other methods are not substitutes for, but are complements to the lecture. If there must remain a doubt for teacher educators, then they should compare the grand final live or on television, an opera live or on compact disc, a symphony on tape or at the opera house, and a brilliant public lecture or reading a discursive textbook in private. In all of these, the alternatives are complements, although, at first thought, they may appear to be substitutes.

Arguments against the use of lectures

There are four main groups of arguments against the lecture method (see for example, Barry, 1995; Bligh, 1972; Clerchan, 1994,1992; Gibbs, 1989;

Laurilland, 1993; Penner, 1984; McLeish, 1976; Ramsden & Dodds, 1989). The first includes the student experiences relating to boredom and inattention, often as a result of bad lecturing, and to the view that all students have experienced bad lecturing at some time. The second relates to lack of learning and commitment to long term memory, as a direct result of lectures. Other methods, such as discussions, tutorial groups, questioning, one-to-one teaching and various combinations of these, are suggested as producing better learning than lectures or combinations of lectures with other methods. The third relates to a view that lectures are redundant. In a modern age of television, computers, the internet and compact disks, we don't need lectures. The fourth relates to a lecture's lack of concern with and for individual differences in students. It is alleged that all students are treated the same in lectures and this does not maximize learning.

The first group of arguments against lectures generally alludes to the sheer boredom imposed on students. These are the weakest arguments of all. They generally point to the poor lecturer who reads, speaks in a monotone, does not use personality, humour, gestures, voice control, music or visuals 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 uninterested deliverer to an even more uninterested 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 later, 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.

We can recall undergraduate lecturers who for one hour would talk incessantly, without breaks, variation or interruptions. The lecturer appeared oblivious to the theatre, the paper planes or the

noise, and student boredom. Copious notes were structured and detailed in relation to the subject matter. The lecturer was knowledgeable and, while it was obvious a lot of time was spent preparing notes, the presentation was made without much feeling, variation, pertinent explanation or enjoyment for the audience. When the hour was finished, the lecturer would rule a red line underneath the sentence just finished. In the next lecture hour, two days later, the lecturer would start again from the old red line and proceed to a new one. Such a lecturing technique is abhorrent and totally different from our techniques.

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' and experiments by John McLeish (1976) where students listened to tape recordings and, of course, the extensive work of Bligh (1972) who purported to show that lectures were satisfactory for transferring information, but not for stimulating thought or changing attitudes. This latter view is expounded by Barry (1995) in a recent university teaching text. Many of the experiments and comments made on lectures and lecturing refer to what we call bad lecturing. We do not consider that they are true for the types of good lectures and good lecturing that we envisage.

A second group of arguments is based on theories of learning and belong to the realm of educational psychology. It is claimed that 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 a view that lectures, on their own, do not ensure long term memorisation of detailed arguments for every student (although for some students it does, in our experience). However, lectures are not the end of learning; they are usually only the beginning. After the lectures, students learn in many other ways,

such as by reading, by discussion with their peers and teachers, by doing problems, by arguing both inside and outside of formal tutorials. The good 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 and, in many cases, with bad lecturing methods. It is sometimes said, erroneously, that lectures are neither interactive or adaptive, and they put all the work on students (Laurillard, 1993). This, 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. 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 an experiment played back on a tape. Indeed, McLeish (1976), in 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 lecture halls of our universities.

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 point out that the spoken word differs from the written word. It conveys different information. There is a great deal of difference between a lecture with 800 students, where enthusiasm and enlightenment for the course is conveyed with and for a focus on the group, and reading a dry text on 'marginal productivity' or 'locus of control' in the confines of one's study. Good lecturing can change the image in the students' mind of the otherwise dry text.

The fourth group of arguments against lecturing generally relate to individual differences in students and an apparent lack of concern with this by the lecturer. It is claimed that lectures are 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 our context. It is a reasonable starting point, but its not the only one. Our language, our customs 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. Much of what we have come to know and feel, we learnt as part of society; a very large group if you like (see Waugh, 1994).

A MODEL OF A GOOD LARGE STUDENT LECTURE SERIES FOR TEACHER EDUCATION

In this model, there are eight variables, manipulated by the lecturer that contribute to a good lecture series with more than 100 students. These are: atmosphere in the lecture hall, structure and clarity

of the lecture, the learning and information content of the lecture, lightheartedness during the lecture, a personal and helpful relationship with the students, arranged and interesting breaks during the lecture, relevant illustrations and examples to the students, and a motivating and stimulating delivery to the students. We expect a tutorial or seminar system to be offered after each lecture.

Atmosphere in the classroom

A happy relaxed atmosphere that inspires students is difficult to define in words, but something that you know is right when you see it and feel it. It is critical to an overall strategy in teaching that just the right atmosphere is created in the lecture room. 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 lecture; they must feel that learning can be, and is, fun. This requires the creation of an atmosphere that is happy and relaxed. Some students come with this view already; the role of the lecturer is then to reinforce their preconceptions. Others come with less favourable preconceptions; here the role of the lecturer is to create a new experience and new environment for these students.

The created atmosphere is a group response. It is not the sum total of individual experiences. It exists because of the group and is heightened by the experience of the group as a group.

Structure and clarity

Lectures should be structured and explanations should be clear and concise. Material needs to be organized into a pattern. Each lecture 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 lecture points the direction and conveys some of the enthusiasm. The last cements the whole pattern and leaves the students with a sense of fulfillment, the knowledge that they have learned a

lot, and have had a good time doing it. Again, it is the group that is travelling this path and the imaginary landscape exists in the group mind, with the knowledge that others are travelling this path. It is a part of the excitement and the evolving feelings, as the journey continues.

Learning and information content

Students must feel that they are learning and that lectures are worthwhile. Being happy, enthusiastic and content, is part of the strategy. However, 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. While the knowledge gained is what is left after the journey is completed, 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, acquired both then and subsequently in various learning arenas after the lecture.

Lightheartedness

There should be just the right balance of seriousness and lightheartedness in each lecture. 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 lecturer 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 lecturer. 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 of learning may well be the task of individual students; 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 accessible, concerned about their progress and an inspiration to them. The lecturer is more than an instructor. While there is an instructional role to play, there are human relationships involved as well. It can never be forgotten that the lecturer is not teaching just educational matter, but the lecturer is teaching and helping people. However one defines teaching, successful lecturing involves a complex interpersonal relationship between students and lecturer. Highet (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 the individual relationship between the teacher and the group is very important.

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 lecture 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 lecturers can control the timing of student attention, then they 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 good lecturing. While good teachers do this unconsciously, 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 difficult task for those of us who come from a different generation. Our students all look so young and they were born in a different age. Still, the good lecturer tries to put the material in a way that is relevant to the student generation, not just to ours, and not just to our own research and intellectual pursuits. Again, this is a technical aspect of lecturing and, again, by choosing examples directed at the group, the lecturing 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 students. Each lecture series 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 lecturer, with the lecturer controlling the students' attention span. If we do these things, we can interest, stimulate and inspire students. Lecturing and learning can be fun! In a 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 motivate and inspire students to learn beyond the lecture.

Accompanying tutorial system

All good lecture series at universities should have a tutorial and problem-solving session soon after each lecture. It is here that individual differences can be catered for. Different students have different concerns and different points that need to be re-

explained or explained in a different way Individual students can raise problems that are concerning them and work through their own problems and misunderstandings with the help of a capable and caring teacher. Important lecture points can be further explained and emphasized to different students, as needed . Extra interesting examples and problems can be given during these tutorials to help students come to an understanding of the knowledge and issues related to the lectures.

DATA COLLECTION

A top-class lecturer was identified at an Australian university, called University X to maintain anonymity. The lecturer had won two vice chancellor's teaching awards and did the vast majority of teaching in first-year lectures with classes greater than 200 students and sometimes with over 500 students. Independent student survey data relating to this lecturer for the years 1991-1993 were available. The lectures were considered to be successful in the sense that students thought they were successful and observations supported this,

TABLE 1 Lecturer approval and disapproval ratings 1990-1993

	1990	1991	1992	1993
Lecture approval rating (large groups)	93%	97%	92%	88%
Lecture disapproval rating (large groups)	3%	1%	2%	2%
Normal approval rating (small groups)	70%	70%	71%	72%
Normal disapproval rating (small groups)	17%	17%	17%	15%

Survey responses categorized according to the model

There were about 750 comments over the four series lectures. In the interest of conciseness and brevity only a small choice of comments are given

since the applause after each lecture would continue even after the lecturer left the auditorium.

Also available were independent student survey data, in a similar format, from University X for lecturers with small groups (less than 50 students).

DATA ANALYSIS

The independent student survey data for the topclass lecturer were categorized into the eight variables of the model of good large-student lecture series. Many student responses could be placed into one category easily, but others would fit two or more categories.

RESULTS

The results are set out in two tables and some student survey responses categorized into the good large-student lecturing model. Table 1 compares lecturer approval ratings of large-student lectures with small-student lectures. Table 2 provides a summary of the student surveys for the large student lecturer categorized according to the good large-student lecturing model.

below and these are representative of the full array of student comments. Negative student comments are not included because, amazingly, there were very few, even from those who disapproved of the lectures. The lecturer's name, Alan Roberts, is fictitious to preserve anonymity.

TABLE 2

Summary of student surveys classified according to the good large-student lecturing model

	1990	1991	1992	1993	TOTAL
Atmosphere	127	102	152	145	526
Information Content	38	37	38	38	151
Breaks in Lectures	18	21	58	42	149
Lightheartedness	35	16	39	38	128
Structure and Clarity	35	28	23	16	112
Delivery and Motivation	14	15	20	13	62
Relationship to Students	10	10	24	16	60
Relevance and Illustrations	3	4	4	3	14

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.

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 attention 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 place it in two categories.

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. He made this subject truly more interesting that 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 air 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.

Having already been at a University for 4 years, I found this course to be the best presented and organized 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 a 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 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 tire subject. For your information, 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 placed 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 last comment is clearly under learning and information content.

What stands out clearly, no matter how subjectively these results are 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 still 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: 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 clearly 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 planned diversions; generally, but not always, these were tangentially related to

the lecture, or the life of the student or the lecturer. In each case, it is reasonable to assume that 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.

DISCUSSION

The evidence from this case study is that the good lecturer must learn to emphasize the things that bind the group and put less emphasis on the individual traits that split the group. Now what these binding things are will vary through time and place. There are many things which bind, for example, first year university students as a group; such as, they are all doing our subjects, they are interested in music, films and television, they like to laugh and enjoy what they are doing, and, importantly, they want to pass at the end of the year.

While the view has been expressed before, that teams and groups are an integral part of the learning process (Durkheim, 1956; Perry, 1995; Vygotsky, 1978), it is not a commonly accepted view in universities, where lectures are often seen as a 'necessary evil'. It is worth noting two

quotes, one from the sociologist Durkheim (1956) and the other from the educational psychologist Vygotsky (1978), which support our view that good lecturers make the group of primary importance.

A class, indeed, is a small society, and it must be conducted as if it were only a simple agglomeration of subjects independent of one another. Children in class think, feel and behave otherwise than when they are alone. There are produced, in class, phenomena of contagion, collective demoralization, mutual overexcitement, wholesome effervescence, that one must know how to discern in order to prevent or to combat some and to utilize others.

(Durkheim, 1956, p 112)

Every function in the child ~ cultural development appears twice: first on the social level, and later, on the individual level: first between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relations between human individuals.

(Vygotsky, 1978, p57)

Clerehan (1992, 1994) makes much of the individual differences as well as the difficulties in note-taking during lectures.

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.

Traditionally, it is the individual we 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 usually 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 organized in a lecture to improve performance in examinations. What we are suggesting here is that the transfer of detailed knowledge is not the first 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.

The good 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 a series of lectures absorbs and accepts this experience. If the individual comes to the lecture, that individual is part of the new environment and is absorbing images from it. Outside the group, individuals can challenge and evaluate the ideas, but inside the group, at the lecture, the individual is just part of what is there. This not to say that learning to challenge ideas is not part of the lecture material. In a good lecture series, it always is but, in this case, the learning to challenge simply becomes part of the group response, the image and the atmosphere.

Language of course has a similar characteristic. There is little 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. While 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.

Speakers must have the system of language internalised before they can even begin to speak. Speakers who know how to speak only those words which they actually do speak can hardly be using language to bear information. Their 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 the range of possible signals that have not been selected.

(Harland 1987, p125)

If more than words are being conveyed in a lecture, it is not valid to just 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.

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 better ways of acquiring that sort of information. 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. In some cases, they 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. It seems a curious and erroneous conclusion that lectures cannot be used to stimulate thought and change attitudes (for example, see Bligh, 1974; Ramsden & Dodds, 1989, pp. 36-37; Barry, 1995). The data presented here show that this is wrong for one good lecturer, at least.

To have tested the audience on simple questions of what was 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.

A great lecture is as significant as a brilliant symphony. When it touches the hearts of the imagination of students, it has lasting value. An inspired lecture gives color to the experience; it heightens the sensations of the moment. Students experience what Aristotle called a catharsis, a projection of individuality into a universal realm. (Frederick Mayer cited in Penner, 1984, p. 66)

CONCLUSIONS

We can summarise 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 themselves, 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.

The argument has been made that the large-student lecture can play an important role in a teaching package where the collective response, rather than individual response, is the central feature of the good lecturing model. To understand this argument, we must reverse our normal way of thinking: the group is now primary, with the information that is carried away from the lecture being, in part, group information and 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. Psychological theories of learning need to be modified to take this into account.

If we accept that the group is dominant, then we must accept that the role of the lecturer is to create 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 to complement the large-student lecture.

We have chosen to discuss only the straight lecture method. In large groups of 200 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 the size of the group is reduced to, say 50 students, modified lectures can be used to move towards the Socratic educational 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. However, we may gain in other ways through individual learning. Our group arguments are not totally rejected; the group is still important, but not as

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. Our evidence, from students working with a top class lecturer, supports the good lecturing model, as outlined in this paper.

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