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Discussion paper

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STAFF ATTITUDES TO LECTURE CAPTURE

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1. INTRODUCTION: LECTURE CAPTURE AT THE LSE

At the LSE (London School of Economics and Political Science), as in most UK universities, lectures form a large part of the teaching provision. However there are disadvantages to the live lecture, one of which is its ephemeral nature: miss it, and it's gone. It also affords few opportunities for students to ask that something be repeated, either because they did not hear or did not immediately understand. For many LSE students English is not their first language, which makes catching everything in a lecture even more difficult. In 2003, the Centre for Learning Technology (CLT) at LSE began initial experiments with video recording of lectures, to allow students to catch up, review, or revise for exams. Lecture recording has expanded steadily since then, and today LSE has an automated lecture recording system, providing video and audio recording of the speaker and their visual aids in nine lecture theatres, and recording of audio and visual aids only in another 30 classrooms. The system is operated under a strict opt-in policy wherein written consent from all speakers must be obtained for each recorded event.

1.1. A divisive technology

Student attitudes towards lecture recordings are, predictably, positive. Students who do not like watching lectures on a screen are under no obligation to do so. Among staff, however, attitudes towards the technology are polarised. Many lecturers who use recordings consider them a good resource with plenty of pedagogical benefits. Others resist the use of lecture capture, arguing that it is a *dangerous* technology, with negative pedagogical, organisational, and personal impact. CLT's annual staff surveys revealed four main areas of concern:

a)   personal discomfort about being recorded for posterity,

b)   a conviction that recordings would result in a drop in attendance,

c)   the untranslatability of a live, interpersonal event such as a lecture performance into the medium of television and

d)   the loss of essential learning skills such as taking notes, based on the assumption that recordings make note-taking obsolete.

In 2009, two departments decided to opt out of the system as a matter of departmental policy[1]. The majority of academic staff in those departments had decided that lecture recordings were a bad idea and considered that resistance to increased pressure from students would be more robust if it came from a department as a whole.

The areas of concern listed above prompted various questions: Why did academics believe that students would stop attending lectures? What arguments supported the claim that a live lecture

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[1] Individual staff can make their own choice to use recordings if they want to, but collectively the departments hold that they do not intend to use the technology.

cannot 'truly' be captured? Why did staff hold that attending a lecture and learning to take notes is of pedagogical value? What do they think a lecture is, and is *for*? If we can understand *why* staff feel the way they do about lecture capture, we will be in a better position to advise and assist them, as well as to decide how, if at all, we should continue to support and promote the system. To find out, we conducted a qualitative study of staff attitudes towards lecture capture through a series of semi-structured interviews with lecturers. The outline for the interviews was informed by the survey comments and from the existing literature on this subject.

2. LITERATURE REVIEW[2]

Few attitudinal studies of staff exist in this area; most research articles are written from a technical or student perspective. Chang's (2007) qualitative study of academics' beliefs and attitudes towards the introduction of an automated lecture recording system identified two key concerns: an anticipation of reduction in attendance, and an understanding that lecture recordings cannot accommodate particular lecturing styles. The latter point had earlier been identified by Michael Fardon (2003), who suggested that "physical gestures [and] body language" were important components of academic teaching not captured by early recording systems. Chang's study shows that resistance to lecture capture technology is determined by a combination of worries, such as low attendance, pressure from students, minimal benefits for lecturers and "how it may be seen by students as a substitute for engagement." Misgivings about the reliability of lecture recording systems, i.e. about potential and/or actual technical problems, have been identified as further concerns (Davis et al 2005).

Gosper *et al.*'s (2010) survey of 155 staff (plus 6 interviews) from across four Australian universities, concludes that many lecturers believe that lecture capture diminishes the learning experience, while students believe the opposite. "There is a clear mismatch between the student experience and the way they engage in learning and the corresponding conceptions held by staff." This brings into question the nature of teaching and the role of lectures. They argue that teachers' *beliefs* about the role of lectures had not been challenged sufficiently by the introduction of lecture capture to warrant them reconceptualising the curriculum. They also observed that those lecturers who have little sense of choice about their use of lecture capture are more likely to have negative attitudes towards it. Mascher and Skead's (2011) study focuses mostly on student behaviour, but includes a survey of 19 law lecturers, representing both recorded and non-recorded lectures. The main reasons for not recording were inappropriateness of the class format for recording, fears of reduced attendance and pedagogical reasons to do with student contribution to classes. Those who did record did so mostly to manage timetable clashes or for accessibility reasons. Some staff reported negative effects on their teaching, including the demoralising effect of low attendance which made them question the purpose of being a lecturer, and the sense of shifting to a type of "distance education" which had not been planned.

Across the literature, by far the greatest concern is a belief that lecture capture actively discourages students from attending live lectures. Although lectures are not thought to be a very effective learning delivery method (*cf.* e.g. Gibbs 1981), lecturers argue that attendance at a live lecture is at least pedagogically preferable to listening to a recording of it.

3. METHOD

Data were collected through semi-structured interviews with lecturers. Our subjects were initially selected by approaching known users of the lecture capture system, then we selected a similar

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[2] Details of the scope and search terms of this review are provided in Appendix C.

number of non-users by advertising via institutional channels. In total, 24 interviews were conducted, one of which was excluded from analysis because the subject had no lecturing responsibilities. The transcript of a public presentation given by an LSE professor, discussing their view of lecture capture, was also included. Each interview lasted 30-60 minutes. Details of the subjects are tabulated in Appendix A. Interviews were structured around a common set of questions (Appendix B) designed to provoke discussion with both users and non-users of the system.

The authors then carried out a thematic analysis of the interview transcripts to identify the major themes emerging, using NVIVO8 to support the coding process. Each coder identified relationships between the codes and categorised them into a hierarchy; these hierarchies were compared, discussed and modified to reach an agreed interpretation. In the following section, we summarise and discuss the major themes which emerged. We give equal weight to the views of those who are for and against lecture capture, but we did find that those against lecture capture expressed their views more strongly.

4. RESULTS

Three clearly interrelated aspects of lecture capture emerged as nodes around which interviewees constructed their arguments, namely:

1. the lecture itself – the idea that either the availability of recordings or the fact that a lecture is being recorded **changes the nature of that lecture** somehow.

2. the lecturer/performer – the idea that either the availability of recordings or the fact that a lecture is being recorded **changes how a lecturer feels and/or performs**.

3. the student/learner – the idea that either the availability of recordings or the fact that a lecture is being recorded **changes the way students learn**.

4.1. Recording a lecture changes the nature of a lecture

Staff expressed their view that recordings impact the lecture itself in 3 main ways: firstly, if there is a drop in attendance, the lecture will suffer from the loss of audience and change in atmosphere. Secondly, if students think a recording is equivalent to the performance it records, this renders the lecture as no more than a text that can be copied, devaluing the live experience. Thirdly, being recorded changes the lecture because the performer changes their behaviour. Below, we treat these aspects in detail.

4.1.1. STUDENT ATTENDANCE AT LECTURES WILL DECREASE

Similar to findings in other studies (see literature review) and in earlier LSE surveys, a majority of the lecturers (15 of the 23 that mentioned attendance) were convinced that the availability of recordings would lead to a drop in attendance.

Two main reasons were given for why this is a bad thing. Firstly, a badly attended lecture ruins the experience for those who *do* attend (lecturer and students), as it would any performance (e.g. theatre or music), i.e. the shared/communal aspect of the event is integral to the success of a lecture. Secondly, it deprives the non-attending students of a valuable learning experience. Nine of our interviewees explicitly stated that lecture recordings were inferior to "the real thing" and were not a substitute. 15 interviewees stated that live lectures were superior to recordings. Of the 15 who believed attendance would fall, only 3 did not think this mattered. Thus, the most pressing pedagogical concern about attendance relates to what students are missing out when they do not attend. More than half the subjects (15/24) expressed a conviction that the lecture needed to be

physically experienced, and 10 of these suggested that this was because a live lecture is an event, and *not a text.*

4.1.2. THE LECTURE IS NOT A TEXT

In many interviews, we debated what might make a lecture superior to a recording. Lectures were talked about as performance, as guidance, and as narrative. Crucially, the performance part was seen to be a distinguishing feature; a recording of a performance will be less than the performance itself. This was thought to hinge for example on the potential and actual interactions between the people in the room. A live lecture is immediate, whereas a recording is mediated, and learning within immediacy is thought to be educationally important:

> *...a lecture is there to be experienced, on the spot, so that you learn how to listen, how to take notes, that you learn to deal with that situation, in that situation, rather than just from the computer. And what gets lost in the recording are all the interactive things. I have Q & As, I have some sort of debate and all of that gets lost because of course only my voice gets recorded. - S8*

Others argued further that recordings change the status of the lecture, i.e. recordings have a retrospective negative impact. The fact that the recording exists implies that a lecture is a reproducible 'thing', like a text that can be studied as such; but 10 of our subjects denied that a lecture should be such 'texts'. It was further claimed that it leads students to attaching too great importance to the words being said in lectures.

> *Some of [the class teachers] say that it's led to more homogeneous styles of essays, that the essays are much more regurgitating the lecture, because they can listen to the lecture just before they write their essay. Others say that being able to do that gives them a good basis to build on. I don't know which of them are correct. - S24*

9 of our interviewees did not justify their trust in the superiority of the live lecture, but rather asserted it without citing coherent reasons or evidence. For example,

> *Lectures are very odd in that, in theory, it's a terrible form of conveying information. In theory you could read much more, and much better, material in the same amount of time. ... And yet, lectures work. Lectures have their place. But the reason for that is very much that it is personal communication, it's two people, well, a lecturer and an audience in that sense, in a room, having a personal conversation, well one-way obviously, one talking to another, but it's in that, the value of it. - S1*

Three interviewees questioned the value of the lecture, one stating that it "deflects from critical and reflective thinking about the material", adding that although they "try to develop ways to encourage students to critically evaluate […], the lecture format is not a good format to be doing this" (S8). Of course, if even the live lecture isn't a good format, then it might be argued that there is even less value in recording it.

4.1.3. CONSCIOUS OF BEING RECORDED, LECTURERS WILL CHANGE THE CONTENT OF THEIR LECTURES

Of the 11 subjects who stated that recordings also had a direct effect on how they performed, 7 thought it was for the worse. Lecturers felt that they would feel less comfortable using jokes or informal language, and argued that they could not use sensitive or controversial examples in their teaching. As recordings are reproducible, where live performances are transient– lecturers feared that they would consciously or unconsciously check themselves.

> *... my biggest concern really would be that it leads to certain, a type of sanitised lecturing. You don't make jokes because you think, "oh they'll be on the Internet", if they're not quite PC, you don't say controversial opinions, which I might not even believe in, but just for the sake of argument – S5*

However, a smaller group of users of lecture capture stated that they did not feel their style had changed as a result of being recorded, and 3 of these agreed that being recorded might actually improve lecturing quality, as lecturers would want to make a good impression on the recording.

This final aspect, the effect on the lecture content and style, leads into the second of our main themes, which concerns not the nature of the lecture, but the nature of the lecturer, i.e. the effect lecture recordings has on the member of staff being recorded.

4.2. Recording a lecture changes how a lecturer feels and acts

Being recorded has an impact on the performers, i.e. on them personally, on how they feel, and how they feel they should teach. This personal impact can be distinguished into *discomfort* at the idea of being recorded, the *loss of control* that recording may entail, and the *pressure* that can be exerted on them by students.

4.2.1. DISCOMFORT

Our interviewees were concerned with the fact that recordings persist as artefacts that can be accessed by students for a long time. Five of our interviewees expressed unease at knowing that their performance was committed to "eternity" (although another 3 said that this prospect did not bother them). About half of them (11/24), including some users of the system, alluded to some form of personal discomfort with the idea of being recorded. There were, for example, worries about the way one looks or sounds on the recording, or worries about committing mistakes. In 4 of these cases, however, the lecturers made clear that these weren't necessarily issues for *themselves*, but that they could be for others; for example, for new academics, who might also feel less able to opt out of being recorded.

A further anxiety arose from "YouTube fear", a worry mentioned by both users and non-users of the system that recordings might somehow end up outside the LSE walls. Six subjects expressed concerns that their teaching might be misconstrued and taken out of context, While another 8 worried that the potential embarrassment of recorded mistakes would be very much increased if released to a wider audience. (Note that "YouTube fear" was one of our probing questions (see Appendix B) so it is not surprising that the issue is explicitly mentioned in most of the interviews.) Importantly, not all interviewees cared about recordings being made available elsewhere. Five lecturers, including one non-user, were not at all concerned about where their recordings ended up or who saw them, and they also saw the positive side of making recordings available outside of the LSE, either in a spirit of open education or as a form of publicity for the LSE. However the need for quality control was recognised in such cases.

> *If … Kingston wanted to … use our first year lectures I'd be perfectly happy for them to do that. They would then teach the classes, set the reading list, do the exams. I wouldn't worry that "Oh that means some people choose to go to Kingston rather than LSE" because, bluntly, I don't think we're in the same market. - S24*

Further discomfort arose from the notion that creating recordings means creating a *quotable* record of what one said. Users and non-users identified this as a concern, saying that they would not want mistakes or gaffes to be quoted back at them. This issue therefore alters the behaviour of the

performer – including how they feel (i.e. how they feel able to perform) – as well as altering the content of the lecture itself. On the other hand, one lecturer said that recordings actually protected him, as it provided evidence of what he really had said, which could counter any accusations that might be made against him.

4.2.2. A LEVEL OF EDITORIAL AND RELEASE CONTROL IS DESIRABLE

Interviewees expressed a need for control over what is seen by students, and when. Two lecturers (non-users) thought it would be useful to defer releasing recordings to avoid affecting attendance, while four others (all users) thought that students needed to be able to review the lecture immedaitely after it was given. Three interviewees mentioned the need to be able to edit or withdraw recordings, to avoid releasing things students should not see again. We believe this is relates to the issue of discomfort mentioned earlier. Discomfort about the technology as it currently exists, which is perceived to give little editing or release control over recordings, might be overcome if such control could be more easily (and time-efficiently) managed.

The current opt-in system was largely regarded as being the correct approach by those who mentioned the subject. It was also noted, however, that opt-in can be illusory where there are external pressures to use the system (in particular from students, as we shall see next) or that it can be compromised where scheduling mistakes occur.

> *I think that the opt-in system as such is very right, I much prefer that to being forced to go through the sort of Facebook-style privacy process to have to opt out of it for every single lecture, never mind being forced into a system where it would become semi-mandatory - S1*

4.2.3. PRESSURE FROM STUDENTS

Five subjects expressed concern that demand from students placed pressure on those lecturers who chose to opt out of lecture recording. This concern was not only self-regarding: one interviewee who used the system worried that pressure might be put on colleagues who did not want to do the same:

> *...and lecturers who, for whatever reason, didn't do it would become, sort of have campaigns started against it or something like that, and I just don't want to see it go that way. Not sure how to avoid it. - S18*

However, concern about how student pressure might change school-wide policy on recordings focused mostly on what it would mean for students. Most non-users were adamant that they had good pedagogical reasons for not recording lectures. It was considered their responsibility to offer students what they *need* rather than what they want,and that student expectations ought to be managed rather than acceded to. It was suggested that these "uneducated" expectations were due to external factors, such as students' school education and an increasingly consumerist culture in UK higher education.

> *We really can't simply say yes to everything that students ask, however much we'd like to make them happy. Rather, I think, our job is to manage their expectations, and to … create the sort of learning environment that helps them make what I think is an absolutely crucial move from their school or pre-LSE learning experience to the more independent form of study which surely is definitional of higher education. - S6*

4.3. Recording a lecture changes the way students learn

How does lecture capture affects students' learning and their learning behaviour? Our interviewees' answers to this question were informed by their trust, or lack of trust, in their students as independent learners, and by considerations of what the student contributes to the lecture. Offering recordings might make students think that they are being offered a choice between two equally

valuable alternatives, whereas choosing recordings would in reality be bad for them as well as for those who do attend.

4.3.1. MISTRUST OF STUDENTS AND ASSUMPTIONS ABOUT THEIR BEHAVIOUR

Eleven subjects (two of them users of the system) expressed concern with students' ability to take responsibility for their own learning. These teachers doubt that undergraduate students, in particular, understand that recordings are meant for review and revision purposes only. They insisted that the possibility of using them as a substitute for attendance would constitute too great a temptation, even if students had good intentions.

> *And maybe it's not so much that students are lazier, but it appeals to the human in them not to show up if they have an alternative, a backup. – S4*

> *I understand the tendency of students not wanting to go … [but] I am against giving them the opportunities or tools to actively not come. There has got to be a price to not coming to lectures. – S10*

Four interviewees expected students not even to manage watching the recordings, thus missing out on valuable teaching, while four others believed that students would fail to engage properly with their studies until the last minute, in the mistaken belief that they can "get it all from the recordings".

> *I do wonder about it sort of providing a prop to students who think "well, I'll leave it till Easter, then do the revision, and the recordings will be there", and I bet they have a bad experience when they try. - S18*

Only a couple of lecturers suggested that the students would use the recordings immediately, with most others assuming they would be used for revision. Furthermore, only one lecturer suggested that students might be more likely to only review the parts of a lecture that required clarification, while two others (both non-users of lecture capture) expressed the view that students should not be revising by re-watching hours of recorded lectures.

> *In revision, do you really expect students to resit 10+ hours of lectures? - S4*

A certain paternalistic attitude prevailed, as interviewees explained that students were unable to manage their own learning and/or did not understand what was good for them as learners, meaning that they should not be provided with resources that they might be expected to misuse. It was clearly seen to be the role of teachers to coordinate and guide student learning. One interviewee freely acknowledged that

> *[not giving them recordings] is a sort of paternalism, but it's good, justified paternalism. - S5*

Others made a clear distinction between undergraduate students and postgraduate students who could be trusted to make more 'mature' choices:

> *Especially first year students aren't that mature. I think you assume a very grown-up attitude that first year students have to still develop … Master students are different, have a different attitude. - S8*

The idea of independent study was, for those that mentioned it, a key issue. Students were expected to work things out for themselves, to critically evaluate sources, and to develop the skills to be able to do that. However, this expectation was not extended to lecture capture; rather than considering recordings as resources about which students have to make mature decisions, they were instead thought to offer a short-cut past important aspects of learning that only a live lecture can provide:

> *...you have to be out of your comfort zone, you have to be hearing different voices, struggling with things you don't understand at first … if it's hard and if they're struggling, they're*

learning something and they're making progress. Lecture capture would seem to me to subvert what I'm trying to do with the classes. - S7

Though these doubts about students' maturity dominated, four lecturers expressed the opposite view, believing that LSE students could and should take responsibility for their own learning.

I just give students the choice and they can come to the lectures if they want, and they'll have the recordings as well. They're grown up enough to decide what's good for them ... they should be able to make their own decisions about that. - S19

Though S19 did expect some students to make the wrong decision, they considered students as adults, responsible for their own decisions. Interestingly, the interviewee was not "precious" about their lectures, the effort that goes in preparing and giving them, and instead said that all they really cared about was their students doing well:

I want my students to do well in the exams, and anything that will help them to do that has got to be a plus, particularly for reviewing purposes, it would be a great resource to have. - S19

4.3.2. STUDENT CONTRIBUTION TO LECTURE

Users and non-users alike were concerned about the effect that lecture capture might have on student contributions to a lecture, either because being recorded would inhibit them from speaking, or because they no longer feel the need to ask questions when the recording is available. The importance of asking questions in lectures was stressed by five interviewees, but there were mixed ideas about whether lectures were, or should be, interactive. Three subjects stated that lectures were interactive, three that they were not, and three others suggested that recording lectures might lead to a reduction in interaction.

We experience more and more disengagement, especially from certain nationalities which are not so used to face-to-face interaction with their teachers, that are not really used to raise their hands in the classroom and those we always struggle to engage … even if they attend the lectures they may be discouraged from asking questions, coming to see you at the end of the lecture, coming to see you at office hour because they just assume that the lecture is there and they can listen to it again. - S11

4.4. Recording a lecture is a good idea in special circumstances

4.4.1. CONTINGENCY

There was broad support, amongst users and non-users, for the idea of recording lectures for contingency purposes. Fourteen subjects saw the benefit of allowing students to catch up when they had missed a lecture through no fault of their own; in fact, 4 subjects who did not like lecture capture accepted its value as a contingency backup option.

It's not like we are categorically against – also there was the whole thing about swine flu, we said OK, if we get to a stage where large numbers of students cannot come to class then we agree to capture lectures. - S10

Three subjects saw a role for recordings to fill in for the lecturer when they were not able to give the lecture at the scheduled time, either by pre-recording the lecture or else by re-using a previous year's recording.

… we missed one of the lectures because of the snow problem and we dealt with that [by] making the video from the previous year … available. So basically we removed an hour of teaching time. And the students found that completely acceptable and there were no complaints about that. - S20

4.4.2. ACCESSIBILITY

Four of those who were against lecture capture in general agreed that they were happy for students with dyslexia or impaired hearing to record lectures themselves using digital recorders. Two of these pointed out that this was not a justification for using a fully automated system. In a few of our interviews, the subject of dyslexia gave rise to more general speculations, such as "for those people who may be dyslexic, dyspraxic, something like that, and who might benefit more from lectures than from other forms of intake, I should think that actually attending them would be even better." (S1).

Meanwhile, S7 wondered whether, as their subject is essentially verbal, allowances ought to be made at all:

> *Insofar as people have difficulty with words, should they have, in a subject that's entirely word based … do we make allowances for them relative to people who don't? So I think as soon as you introduce that, it's probably impossible not to give it to everybody … And that might be a reason to give it to nobody. - S7*

5. DISCUSSION

5.1. Effect on the nature of the lecture

We have seen that lecturers' attitudes to lecture capture are complex, and we found that most of them, users or non-users, sceptics or enthusiasts, either defend or dismiss the system primarily on pedagogical grounds. But, like Chang (2007), Gosper (2010) and Mascher & Skead (2011), we found that the prevalent barrier to adopting the system is a fear about drop in lecture attendance. This is puzzling insofar as it cannot be conclusively backed up by research evidence – and indeed, the majority of our interviewees could not ground their fears in anything other than speculation or second-hand anecdotal observation. Pursel & Fang's (2011) review of 26 studies on the link between provision of lecture recordings and lecture attendance concluded that "in the majority of studies … [the data] indicated no influence or no negative influence of lecture capture technologies on attendance." However, it is important to note that these studies include those which use students' self-reported attendance in surveys, as well as actual attendance taken at the time of the lecture. Relying solely on attendance data, a key study is Traphagan *et al.* (2009) who did find a significant difference in attendance: 51% in the group provided with recordings, compared with 60% in the control group. On the other hand, von Konsky *et al.* (2009), who also used actual attendance data, found no significant correlation, and Franklin *et al.* (2011) found that some students' attendance records went up by 5.4% (see Karnad (2013) for further details). Thus, research on attendance is at best inconclusive and we suggest that more focused work needs to be done on finding out not only if students are more tempted to drop live attendance, but also why they would (or would not) drop attendance. After all, students may have *good* reasons for not attending lectures, if lecture recordings are available. Rather than choosing recordings over lectures either *because* they don't know that they are 'losing out' or *despite* knowing that they are 'losing out', they may in fact know that they are *not* 'losing out'. We have not yet settled the issue about the value of lectures. Laurillard (2002) asks:

> "Why aren't lectures scrapped as a teaching method? If we forget the eight hundred years of university tradition that legitimises them, and imagine starting afresh with the problem of how best to enable a large percentage of the population to understand difficult and complex ideas, I doubt that lectures will immediately spring to mind as the obvious solution. "

Again, what we would like to stress is that lecture capture is a divisive and a disruptive technology. Higher Education institutions in the UK are largely based on the lecture model of education, and

lecture capture threatens this model, because it raises the question of what the lecture is for. The majority of our interviewed lecturers hold that the lecture is a valuable mode of teaching/learning, but there is no clear consensus about what a lecture is. Is it (like) a text or is it something more intangible, as other live performances are? If it is something more intangible, then its capture would be at best yield a flawed alternative product. From this arises the second question: whether students are capable of understanding the difference and making educationally valid choices between the alternatives.

5.2. Effect on the lecturer

Chang (2007) reports on lecturers' perception that there is little benefit to themselves from being recorded. In comparison, a group of our interviewees go further, identifying a direct *disadvantage* to themselves and their peers in the form of personal discomfort from being recorded. This is a valid consideration; perhaps future lecturers will be less worried about such matters, but universities have a duty of care towards all their staff. Discomfort will also arguably have a negative impact on the quality of the lecture, so ignoring any negative effect a technological system may exert on lecturers is not desirable. Similarly, the need to have editorial control over recordings is understandable. Lecture capture systems will be more acceptable to all potential users if they know they can remove embarrassing, incorrect or controversial material. It might also be desirable to open up levels of release control, so that teachers can directly determine when students will be able to access recordings. Finally, with regard to student pressure, it is important that decisions to allow recordings should be made on pedagogical grounds. Students come to university for quality education, and in order to get that, they must understand that teachers will make informed decisions on the use of educational technology on their behalf.

5.3. Effect on the way students learn

The worries about drop in attendance prompt a further question: why should a drop in attendance matter in the first place? Lecture attendance at the LSE, as in other UK HE institutions, is not compulsory. This suggests two things, namely a) that on the whole educators present lectures as a voluntary (if important) learning experience, and this in turn suggests, b) that there is an unspoken understanding that responsibility for their learning lies with the students themselves, who are regarded not as children but as adults. Thus, there is at least some tacit understanding that students can make their own educational choices. Of course, one might argue that attending a lecture is a less consumptive activity than passively viewing recordings. A proximity to others and the synchronicity of the experience may give a sense of sharing which goes some way towards community learning. Assuming lectures do provide some educational benefits, lecturers have good reasons to want their students to attend. Academic staff want their students to learn, to pass their exams and to successfully attain the degrees they are studying for. They also fear that their students are not mature enough to make the right decisions to do this. This fear, which is no more than an assumption, is indicative of mistrust and a paternalistic mode of authority. It implies that 'students don't know what is good for them', and in one or two of our interviews this attitude was made explicit. Of course, undergraduate students are not likely to be at the same level of understanding their own learning as postgraduate students or teachers. Further, teachers *do* have a responsibility to guide their students in their learning, to make sure that they do not make bad choices out of ignorance. Teachers of undergraduates are responsible for supporting and enabling the complex transition from secondary teacher led education to independent learning, which explains Laurillard's emphatic statement that her book (2002) "starts from the premise that university teachers must take the main responsibility for what and how their students learn." However, she does this in the understanding that students do not have many choices when it comes to their learning, not that they are unable to make responsible

choices. Whereas our staff – and we would suggest that this applies beyond LSE – judge their students by standards that are not then disclosed. "It appeals to the human in them not to show up" (S4) - this statement might after all *not* be representative of the current student body, but rather representative of this particular subject's attitude. The solution, as we mentioned above, might be to focus further research on students' abilities to make responsible adult choices and into the differences in student performance according to those choices.

5.4. Special circumstances

Our study shows that even skeptical lecturers find lecture recording acceptable under special circumstances, such as contingency situations, or for students in specific circumstances, such as those with disabilities. This suggests that those who resist lecture capture are far from dogmatic in their resistance, which may be a good sign for future dialogue on the subject. Mascher & Skead (2011) find something similar; of the top five reasons for recording lectures that teachers gave, the first two were (i) to assist students with timetable clashes and (ii) to assist students with disabilities, indicating that practical reasons for recording trump pedagogical ones. Similarly, Chang (2007) found that the most prevalent reason for academics to use lecture capture was for "equity reasons", which here includes allowing access to students affected by illness, family needs, disability, or work commitments, plus those from non-English speaking backgrounds. Our interviewees also refer to the potential for more interesting ways of making use of recorded content. We wholeheartedly support such ideas, and we are currently involved in a number of projects to support the use of 'flipped' lecture models and the re-use and re-packaging of existing recordings.

5.5. Further implications of the results

How should our results influence future decisions about the use of lecture capture at LSE? At the time of writing, there is an on-going discussion within LSE about whether we should move from an opt-in to an opt-out system, and various student groups are pressing for such a change. We will make the results of our study, along with other reviews of the literature, available to the relevant committees to help inform such decisions. Studies such as this one should also help the dialogue between students and staff, explicating the reasons why staff may not be willing to provide a service that many students are starting to demand as a standard.

More generally, our results highlight some areas for policy-makers, both within LSE and across UK HE as a whole, to consider. The first is the widespread use of lectures as a mode of teaching. Lecture recording brings into focus the question of what lectures are for: why do we give them, and why is it important that students attend them? This is hardly a new debate, but it is given added importance with the advent of mass lecture recording. Our study also highlights the importance of considering lecturers as people with their own needs, whose feelings about the way they do their work are important. This is perhaps becoming somewhat lost as higher education becomes more consumerist and decisions are increasingly predicated on student satisfaction.

APPENDIX A

Identifier	Role	Sex	Status when interviewed	Initial attitude to lecture capture	Type of subject taught
S1	Senior Tutor	Male	Non-user	Very negative	Qualitative
S2	Visiting Senior Fellow	Female	Non-user	Open-minded	Qualitative
S3	Lecturer	Male	Non-user	Open-minded	Qualitative
S4	Visiting Senior	Male	Non-user	Very negative	Qualitative

				Fellow		
S5	Lecturer	Male	Non-user	Open-minded	Qualitative
S6	Professor	Female	Non-user	Sceptical	Qualitative
S7	Lecturer	Male	Non-user	Open-minded	Qualitative
S8	Lecturer	Female	Non-user	Very negative	Quantitative
S9	Professor	Male	Non-user	Very negative	Quantitative
S10	Lecturer	Male	Non-user	Sceptical	Quantitative
S11	Lecturer	Female	Non-user	Very negative	Quantitative
S12	Visiting Fellow	Female	Non-user	Very negative	Quantitative
S13	Administrator	Female	Not Applicable	Open-minded	Not Applicable
S14	Reader	Male	User	Very positive	Qualitative
S15	Lecturer	Male	User	Very positive	Qualitative
S16	Professor	Male	User	Very positive	Qualitative
S17	Senior Lecturer	Male	User	Not bothered	Quantitative
S18	Professor	Male	User	Mixed feelings	Quantitative
S19	Fellow	Male	User	Aware of concerns	Quantitative
S20	Professor	Male	User	Aware of concerns	Quantitative
S21	Senior Lecturer	Male	User	Mixed feelings	Quantitative
S22	Lecturer	Male	User	Aware of concerns	Quantitative
S23	Lecturer	Female	User	Aware of concerns	Quantitative
S24	Lecturer	Male	User	Very positive	Quantitative

Table 1: Interviewees by role, sex, status as user of lecture capture or otherwise at time of interview, and type of subject taught. Results from subject S13 were excluded as this interviewee did not have lecturing responsibilities. Status as a non-user does not necessarily imply opposition to the idea of lecture capture.

APPENDIX B

Questions to be used with *users* of the system:

- Can you give me your overall impression of the system (by "system" we mean lecture capture as a whole)?

- Why did you decide to use it?

- What are the main benefits and drawbacks?

Questions to be used with *non-users* of the system:

- Can you explain why you don't use the system?

- Can you see any possible benefits?

To probe:

Are your reasons to do with:

- IPR?

- Pedagogy?

- Performance anxiety?

- Worry about drop in student attendance?

- General disdain for technology?

APPENDIX C

The original 2010 literature review and its later extension used the following indices and search engines:

Citation indices searched:

- British Education Index

- Australian Education Index

- ERIC

- Scopus

- ISI Web of Science

- Google Scholar

For this study we concentrated on material written in the last 10 years, limited to empirical studies that have been published either in academic journals or presented at conferences. We have excluded several studies that used only small populations of enthusiasts or early adopters, as these did not give a balanced view of staff attitudes.

Search terms used:

- Lecture capture | Lecture recording

- Staff | Lecturers

- Attitudes | Perceptions

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