Is Recording Engineering?
Focus group discussion
Wrexham Glyndŵr University, 9th January 2012
Transcription

Those present at this event were Jez Wells (University of York) and second year students on audio technology related programmes at Glyndŵr University. Students are listed anonymously as s1, s2 etc. As this is a transcription from an audio recording of the event it has not been possible to identify those who spoke more than once with the same anonymous label (hence there are more labels than people who were present). However, it has sometimes been possible to identify one speaker with more than one comment and in these cases the same label is used.

Jez gave an introduction to the project and then began the discussion.

Jez: Is Recording Engineering? Before I break this down into smaller areas, does anyone a particular viewpoint on this, on what a recording engineer is?

s1: It's different from a producer, but at the same time one person can do both jobs. My opinion is that producers are more creative, whereas the engineer is actually in control of the equipment.

Jez: So, the producer is coming up with the ideas, the producer knows what sound they want and they then go to the engineer, who presumably has a mastery of the equipment and is able to make that happen in some way? You make a good point, and it's interesting that you began by defining an engineer as what they are not, and actually that is a very useful way of doing things sometimes: if we do know exactly what something is, then to say what it isn't is a very good way of slowly but surely getting to the truth. So would people in general agree with that: that the engineer is not the producer, although I think you were saying that there is possibly some overlap between the two...

s1: ...yes, one person, in essence, could do both jobs if they're inclined.

Jez: OK, one person could do both jobs but they would need the relevant training to be able to do what they do?

s1: Certainly, again in my opinion, certainly from the recording side, I think 'producer' is a bit more of a creative sort of thing.

Jez: I'm going to jot that down, because that is a word that crops up quite a lot when talking about engineers and differentiating engineers from other people. For the benefit of the recording: I'm writing down the words 'producer', 'engineer' and 'creative' on the white board. Is there anyone who would disagree with that definition, or who would want to embellish it a bit more?

s2: Well, I think that maybe in smaller studios, and probably in a lot of studios, they would probably get somebody who does both. But, what I'd say is, even if you have a separate

engineer they may not know the creative stuff but they'd know all the maths and the technical stuff to make sure that they don't mess with the equipment, I guess. But, generally speaking, we're being taught to know both, so that we can act as both.

Jez: What kind of degree is your study leading to? is it a BA?

s2: It's a BSc honours.

Jez: OK, but at the same time you're actually getting training in both of those. That's interesting because that's kind of similar to the Surrey [Tonmeister] situation, where you get music training but you also get recording engineering training, training in acoustics and that kind of thing but they're calling that a BMus and I think that may be down to the amount of time that's focussed on different areas. So, we've started off by thinking of the recording engineer as someone who is not the producer but, although those two roles are separate, it may well be that one person, particularly in a smaller studio, takes on both of those roles and the producer tends to be creative. So we have 'creative' connected with 'producer' here, so what word would you give to the engineer?

s3: technical.

s4: techy

Jez: Can we just have a show of hands: which roles do you aspire to? Who aspires, once they've arrived at where they really want to get to in their career, who aspires to being an engineer? Seven people, out of a total of twelve, so just over half. Does that mean, then, that the rest of you aspire to being on the producer side? Is there anyone who aspires to being something completely different? Wants to design equipment or wants to do audio installation art or something outside of the recording studio?

s5: Possibly composition, but that's not directly related, although it is in a way.

Jez: What kind of composition, just out of interest? Electronic?

s5: Well, software-based. Also, piano.

Jez: So acoustic stuff as well?

s5: Mainly on software.

s2: I'm not sure if I definitely want to be a producer but I know for sure that you've got to, I don't know if it's besides being skilled, there's a personality thing. I'd say I'm more creative than technical. Whatever I do, it would probably be more creative than technical.

Jez: So, you feel that you have a tendency, and you might end up, more likely to do [production] because of [creativity]. You might be more likely to become a producer because you are more creative?

s2: I'm not brilliant at maths, I'm not super-technical. I'm technical enough though, I think.

s6: I want to go into custom speaker installations.

Jez: For large auditoria?

s6: For large venues, home installations, just stuff like that. I've got a lot of electrical engineering background.

Jez: Where would you put that? So you want to design and create, produce - this is the trouble with the word producer and engineer, to produce something is to engineer it if you want to use language in those kinds of ways - what do you think, if you're providing a bespoke, large multi-speaker sound system for building or a large space, what would you consider yourself to be? What would you put on your business card?

s6: It's an installation engineering isn't it? That's what it would be, because you've still got to take acoustics and physically do something to it.

s7: A producer will say what he wants where the engineer will physically go out and touch and do something with it.

s8: The producer will create the actual idea.

Jez: Those are two really interesting points. You said that the engineer will actually do something, will actually touch something I think you said.

s7: They will physically have an impact on whatever is going on: move a mic, or change this. The producer will say 'well, I like that'.

Jez: They can't just sit in a chair, they have to actually get up and do something and intervene in some way in order to make it happen. And someone was saying that the producer will create ideas.

s8: in the example of installation, basically the engineer would actually would go out and fit out the installation, whereas the producer would actually sit down and design the actual concept.

Jez: So, now we're talking about - it's an interesting example this one because it's connected to both live sound and to the studio but it's a slightly different take on it - in this case, is it that the producer, or the equivalent of the producer in this scenario is the designer?

s9: I would say that that's a design engineer, doing that via CAD or something like that.

s10: Could you say that a producer has a list of things that he wants, whereas an engineer will have a list of things he needs to do?

s9: achieve.

s10: Yes, achieve.

s10: Like if a producer wants something to sound like it's in a concert hall, the engineer will strive to make it sound like a concert hall, if he wants the piece of music to sound like that.

Jez: Does anyone want to add anything to those [ideas]?

s11: I guess to really understand what being a recording engineer is, the way you look at it is not from the studio aspect but from the live sound aspect. An engineer is someone who doesn't just look at a band and go 'well, it needs this', you have to think about, in a live sound aspect, the challenges of where the band are performing, the equipment you have and stuff like that. You have those challenges in the studio: the band comes in with loads of big amps and you think 'well, how am I going to stop that spilling everywhere else?': the engineer isn't just technical, he is creative, it's just a different area of creativity.

s12: He also has to be a problem solver.

s11: Because the producer causes the problems [laughs].

Jez: I like that! You might see that in print some time. You're making the point, then, that live sound engineering is, in general, a better example of audio engineering than doing it in the studio because the challenges are always there which are not necessarily always there in the studio. So, for example, in a studio, if it's a fixed studio, you've got the same room, the same mics, the same tie-lines, everything's patched in already, it's all done for you - well, all the patching and that kind of thing is done for you - you just have to put microphones on stands and put the instruments and musicians in places where you think they should be and apply whatever processing you want to via the console and associated software and effects and plugins and so on to get the sound that you want. Whereas, for a live sound engineer, I suppose you could argue they might be sometimes working in the same building but usually it'll be in a van with a load of kit and constantly having to adapt to the environments that they're in.

s12: I would say that when I work in a studio, I typically do the ground work of an engineer, but then sometimes I do the desk work, but I do it completely differently to people who just do mastering and such like that. I do it so that the raw recording is the best quality you can get and then give it to someone else to do the mastering. So, in my opinion, an engineer isn't just somebody who sets things up, they do recording as well but at a much more basic level where you just have the instruments and that's it. You don't have your effects, you don't have your panning

Jez: So it's a case of getting the best signal? You have an instrument which makes a sound and you view that as an acoustic signal which travels through the air, it then goes to the microphone where it gets converted into an electrical signal and travels to the equipment where it probably gets turned into a digital signal at some point. Are you saying that the engineer is the person that ensures that that happens in the best possible way?

s12: Yeah. I think that, in my opinion, the producer will rely on the engineer to ensure that the signal they have to work in as clean as possible. So, that is correct in my opinion.

Jez: Usually, when I start up with such a big question like that it takes people a little while to get going but already we've had some really interesting and useful points there. So, this area that I now want to focus on: it does overlap with this bigger question, as do all the areas I want to look at. As I say, there are three of these: the first one is identity, and we've already touched on that a little bit because you're on a programme of study which leads to a Bachelor of Science. So, would you all say that, primarily, you're scientists? [the majority shake their heads]. No - OK. The relationship between people's degree titles, not even the title - I would say that the title is 'Music Technology with Video Engineering' or whatever it is that different people are doing, or it might be 'Creative Music Technology' that's the title - but the name of the qualification, which is BSc or BA, there's very often a quite unusual - to put it mildly - relationship between the name of the qualification and what [the students] are doing. So, I think I can take it from the number of shaking heads that I saw that the majority of people here don't think that they're scientists. How many here think they're musicians? OK, there's about three out of 12. So about a quarter of the people here...

s13: I don't even play an instrument.

Jez: OK, well another way of thinking of it: do you need to play an instrument to make music?

s13: well, I seem to be doing alright! [laughs].

s14: I think there's science involved in the way of when we talk about distance and how fast sound travels, but to say that we're scientists: I don't think so. I think we know enough science to get everything done properly.

Jez: OK, but you're not doing experimentation.

s14: No. Well, in a way, if you're moving mic's around you know, and you're experimenting with what sounds good, with the room as well - the acoustics. To back to his 'live' question, live sound, you've got to think on your feet: 'I'm in a different room', you need to know where to put things.

s15: I think certainly, if you're on the producer side of things, it probably does help, even if you can't play an instrument, if you know music theory a bit or if you have some ideas, because it's not just about mic positioning. As a producer you're basically, maybe I see it differently to others, an artist, a musician and you're trying to paint a picture with some sound to represent what's being said in the song. One of the biggest things that I think has changed, compared to 20 or 30 years ago is that, basically, you find out a lot of famous musicians 20-odd years ago they all had fine art degrees because there didn't used to be specifically a music course and it just used be engineer or artist type courses whereas now, for better or for worse, it has amalgamated now.

Jez: Would everyone else agree with that or would there be some disagreement that, whereas before there has been this very clear distinction between the technical person and we can perhaps imagine someone with...in fact if you look at photos of studios in the 1950s you can see someone with a white lab coat standing next to an enormous tape machine whilst over people are poring over a musical score and looking very studious and musical. You're saying that previously there's been this distinct separation between the technical and the musically artistic and you're saying that that's been eroded now, you get people who can do a bit of both.

s15: yes.

s16: I think to be able to record an instrument you need to know generally how it works. You don't necessarily need to know how to play an instrument, but you need to know the best position to put a mic on a guitar or the best position to put a mic on a different type of piano: knowledge of what you're recording. You're going to need to know the instruments.

Jez: And presumably you need to know when it sounds good.

s16: yeah.

Jez: The first one requires a knowledge of musical acoustics: how instruments work and which way sound radiates from a guitar amplifier or from a violin or what have you. But, in terms of judging when you're listening to that coming through this chain of events which is the microphone, the cable to the console and the digitisation process to the workstation. Listening at that point and knowing whether it sounds good, presumably is a musical judgement based on your understanding of the instrument?

s16: Yeah, that's where I think it's had to meet in the middle and there's had to be compromise either side of it where you've got have knowledge in both aspects.

Jez: So, you think then that really an engineer now, moving on from the situation that you were talking about, the engineer now has to have some kind of musical sensitivity, has to have some kind of musical ability. Would people agree with that?

s17: It depends if it's like equalisation then that's an ear for frequency and it's more scientific, whereas if you've got a producer, they'll use words like a 'crisper' sound and that's more creative.

Jez: That's quite a common view point, I think, that the more musically orientated person, the producer is the person who has the grand vision or idea of what it's going to sound like and says 'yes, it needs to be punchier', 'crisper' you said and the engineer, going back to what you said earlier on, is the poor person who has to run around and work out how to get 'crisp', whatever that means, out of the set of controls that they see in front of them. Putting all of that together then, what's your identity? If, in 20 years' time, and you're working in this industry and you're doing the job that you aspire to do at the moment and someone says to you 'what are you?', what are you going to say?

s18: An engineer.

s19: Yes, an engineer.

Jez: An engineer, OK.

s20: When, in the fifties, you had the complete separation of the two, in 20 or 30 years' time it could change again: you could have a completely different look on engineers. Because the technology is going to change within that time, drastically as it has done before. So you might not even need an engineer, you might just need a producer to think of that sound.

Jez: I think that's a good point.

s21: You're always going to need engineers regardless of whether the producer can do it or not, because something will go wrong and no producer has got that amount of knowledge that they can fix stuff.

s22: When you think about it, you have studio equipment in your house: I know people that are 13 and they're recording amazing recordings just off a little Alesis multi-mixer into a USB into a laptop. You wouldn't class them as an engineer.

s21: No, but I mean if there was to be a problem with that, with the mixing desk essentially, the 13 year-old is not going to be able to fix it so you're going to need an engineer.

s22: It depends if he's running it on a computer or not, if he's using Logic or Pro Tools.

s23: I think on a bigger scale when you're in a studio with a proper mixing desk and things.

s22: Well, who's to say that won't change in the future?

s24: It's changing as we speak with more people recording at home.

s25: The thing is that recording is getting easier and easier and easier and things are being made a lot better and work a lot better.

s26: I think there's going to be an engineer all the time, especially with live sound.

s27: Yes, live sound definitely, you're going to need an engineer for live sound.

s28: I still think you're going to need a techy though, you're still going to have to ring someone up and say 'oh, what's going wrong with this, have you got any ideas?', even if it's just for brain storming.

s15: Before, I was going on about the big separation: musicians used to do fine art, engineers used to maths A-level. I think a lot of that, it's not just the times but it's down to the technology because, for example, in the eighties or something like that you hear stories

about producers and bands driving round to about a hundred different warehouses because they want to get the right sound for the snare drum, or something silly, whereas now you just press a button on a processor and it does the same job.

Jez: You find a sampling reverb that will have 120 different warehouses on it already that you don't have to travel around the country to get that sound. So, certain things have become easier in the studio.

s15: You don't have to be creative anymore.

Jez: One thing that I wanted to pick up with your point was: is there a distinction between an engineer and a technician for anybody here? Has anybody got any ideas about what that distinction might be?

s29: Is the technician more to do with cables and the electrical side, whereas the engineer is to do with the sound itself?

Jez: Again, there is no right answer to this. So you're saying that the technician is more to do with the infrastructure of the recording, you said cables, getting stuff to work and then the engineer is the person that actually makes the recording. Is that right?

s29: Yes.

s30: I think a technician, in my view, is someone that fixes the desk. So if the desk has gone, a channel's gone because a fuse has gone a technician will know how to fix it physically. The engineer may have a basic understanding of how it works inside but he's not going to go 'I need to replace that fuse' to get it to work or 'I need to replace that bit of the circuit'. But a technician will go 'oh, that motherboard's burnt out'. The engineer may not know that but the technician will be able to fix or build these types of things.

Jez: Any other ideas on the distinction between the two?

s31: That's a bit flipped round because I thought, when I worked in the industry as well, that the technician was the first port of call: 'I've got a problem with my desk, what do I do?'. Technician goes; 'oh wait, it could be this, could be that, I'll send an engineer down and then the engineer will go and change the fuse.

s32: I work for Scottish Power. If we have a problem with lines, the technician is the person who tells the engineer how to fix it usually. The engineer is outside, the technician will put out a map and go 'right, you need to do this and this is what's connected to it'.

s33: It's a different type of engineer.

s34: A technician would be for a broad range of things and then you find a specialist within that area and then he will come in and...That would, essentially to me the core engineer, to fix the problem.

Jez: yes, and that's certainly a way round that lots of people look at the relationship between engineer and technician but, at the same time, the way round that [s30] has it is relevant to certain industries and I think that's one of problems and one of the issues that we're trying to address here is that no one really seems to have an idea of what these different people do and so therefore if you're going to be trained to be an engineer, or you're going to go for a role as a technician, one of the things that I don't think the industry is particularly clear about at the moment is telling people about what these different things are going to involve when people get into them. And so how can you acquire the skills that you think you're going to need if you don't know what the role is ? So that's one of the reasons why I'm doing this. OK, just to come back to identity: finally, just summarise. I asked you whether you thought you were scientists. Given what we've just had, how many of you think that you are engineers? [Looking at the number of raised hands] I would say that's between half and two thirds people think they are an engineer. So much more than think they're scientists. I can't remember whether I've asked this or not, so I'll ask again: how many of you think that you're musicians in some way or another? So, that's just over half the people here think they're musicians. Right, what I want to move on to now is knowledge and competence. In order to do what you want to do, what do you need to know? Let's just think, at the moment, about what we think a recording engineer or a live sound engineer, for that matter because it's something that some of you guys are interested in as well, although it's not my specialist area - you might have to jump in [to class tutor] if I'm getting any stuff relating to live sound wrong. Thinking about the role of the engineer: what do they need to be able to do?

s35: Facilitating the creative process. You need the technical knowledge behind it, depending on your frame of reference, say if you're engineering for a live band then you could probably do with some background knowledge in all the equipment that you need to run and event or whatever situation you're running for the live band. But also, something to do with the music that they're playing as well.

Jez: So, you have technical knowledge, an understanding of the music. Any other skills that you need?

s36: You need to know the right people.

Jez: Is that in terms of getting into the industry, or of making things happen within it once you're in it?

s36: A bit of both, really.

Jez: [writes on board] we have technical knowledge, musical understanding, and networking? So those are the things that you need to bring to the job. How are you going to get those. What should you study, for example, at university in order to be able to do these things.

s37: It's a large area so you need to know bits of maths, bits of science.

s38: Electronics.

Jez: Which bits of science?

s37: How you use the formulas of science.

s38: Physics.

s37: That's the one! I couldn't think of it.

Jez: Can we break that down any further into....

s38: Acoustic science.

Jez: So, these are the things that you should study if you're going to become a recording engineer.

s36: Can I just say that I've met people that are technicians for the Foo Fighters and they're got their degrees in psychology and they didn't study in anything to do with music or recording, and yet they're technicians for the Foo Fighters and the Foo Fighters' engineers.

Jez: So, they've managed, as lots of people do, lots of people go got university and they acquire skills and understanding and reasoning abilities at university and the ability to go and find out things for them self - that's one of the big things that is different between school study and university study, and that helps them then to go out and do a job. Or it may even be in this case that they went to university, they had a great time or maybe not, and that didn't have any impact on what they did. They would have become the Foo Fighters' technicians whether they had been to university or not. But, if you decided to come on to a degree which is in this area what other things, apart from maths and acoustics, do you think you would need to have?

s39: Bits of music, obviously.

s40: Although we don't do any music on this course. That's not part of what we do. I came on to this course for underpinning science knowledge rather than.

Jez: Is that because you're having a musical experience and a musical life outside of the course so you don't need that.

s40: Yes, that's the sort of thing that you learn on your own, really, unless you want to go very far with it in terms of a classical music education.

Jez: There's a difference isn't there between the demands on a, to use a very general term, pop recording engineer and a classical recording engineer because a classical recording engineer might well be required to follow a score and to be able to very quickly jump from one place to the other and to listen to music and to know where they are in the score. So, I've put music in brackets on the board because not everybody seemed totally sure that that's what they should study. Anything else?

s41: Computer programming and software, these days.

Jez: OK, computer programming: at what level?

s41: Software level.

Jez: So writing C code, or C++ or Java?

s41: Either that or the next stage of proprietary software like Max/MSP, that sort of thing.

Jez: So, we've got electronics [on the board]. I will jot software down and come back to that. What aspects of electronics? Analogue electronics, digital electronics?

s38: Basic functionality: voltages. I don't know. I'm not sure you'd do it at university level to be honest but even if you did it at GCSE level it would help because there's basic things that you have to remember when you're in the studio or particularly when you're doing live sound, like how much you can feed through one current and all that.

Jez: I think what I'm asking you to do for this part is to think: you've been asked to design a new university course, the industry has come to you and has said 'right, what we want is a course which is, once and for all, going to properly prepare people who are going to come into the industry and we know they're going to be qualified and talented and they're going to be able to do the job and do it really well', what would you put into it? You mentioned software, not perhaps the ability to program at a low level like C or C++ or Java but to....

s41: well that's there as well.

Jez: ...to program at the patch level, Max/MSP.

s41: I'd say if you were doing a computer engineering course and you were doing C++ type stuff then you could feed in, as your specialist subject, music but I don't think you'd come into music tech and then drop into the basic level of programming, you know 'real' programming because it takes a lot of background knowledge to do that.

Jez: OK, so we've got maths, acoustics, music (a bit of), electronics, software.

s42: It needs to be electrical and electronic because you're not just working at an electronic level.

Jez: I think I would agree with that.

s38: I suppose it's more on the outside, but I think it would all come into play if you knew a bit of economics and business studies, for freelancers.

s43: I think if you're going to make the course, before going on to the course so you take maths out but you have maths as one of the aspects in order to get on the course, you would need to know a bit of it before.

Jez: You might have a primer on maths at the beginning, or you'd expect to know maths before they came?

s43: You'd be expected to have a basic understanding of maths but then on the course business and economics, physics and acoustics, music (sort of) because you're going to need to know how some instruments react to stuff, electronics and electrical and then software.

s44: I think it's not music as in playing the instrument. I think it's a musical understanding.

Jez: So, stylistic awareness?

s45: Pitch.

Jez: So an ability to understand the relationship between notes that people play on an instrument and what that sounds like. I would put that down as some kind of aural ability. The ability to go 'no, that's out of tune' or 'that's the wrong note'. Other aspects of music: was I right in saying that you were thinking about stylistic awareness?

s44: It's like [x] for example can't play a musical instrument but I still see him as a competent engineer.

s45: I can pick out whether there's a wrong note or something.

s44: The differential between whether you can actually play a musical instrument and whether you're a decent engineer.

Jez: And another thing that's happened over the last twenty or thirty years I would say, is another revolution that has happened in music where no longer need to have studied a particular kind of acoustic instrument through the grades in order to be able to express yourself as a musician. I don't think you were including stylistic stuff, you were implying you thought that stylistic stuff is more your own private thing: you're into the music you're into and you will bring that to what you learn in these areas.

s45: Personally, yes, but if you felt that you needed to skill-up in that area and think that there's degrees out there now where you'd say you could do a creative music technology degree, you might have more of an aspect of music.

Jez: If it's a BA or an MA?

s45: Yes.

s46: I think it would be a perfect module if this was the criteria for a course for an engineer. The one, in my opinion, main thing is training the ears to be able to hear what sounds good and what's bad.

Jez: So, if I'm right, we're now not just talking about pitch and music and whether something's in tune or whether there's a bum note or whatever. We're now talking about the quality of the signal?

s46: Yeah, just your appreciation of sound that comes with listening to lots of music.

Jez: In fact, you could relate this aural facility (I mean an ability to hear and to use your ears to give you information) perhaps to acoustics?

s46: Yeah, definitely.

Jez: Any of these others? Any other area of these where you can actually use your ears in order to...

s47: Electrical, because you have synthesizers and stuff.

s48: Plus with electronics/electrical signal phase etc. is going to apply, live.

s48: I think the music training is technically, in recorded form.

Jez: So, an ability to listen to...

s48:...recorded music and to be able to pick out what's going on.

s49: Music as a form of sound instead of as a composition.

s50: I think the science of the human ear would be useful.

Jez: Right, so that comes under psychoacoustics. The point that has been in is that we need an understanding of how our perception of sound works as well as understanding how sound works.

s51: I have to say, thinking about it, as much as there's not that much psychology involved, I actually think that should be mixed in with the study of the ear, because ultimately I know that genres change over the years and so on and so forth, but if you understand psychology you could be quite mean, or good in a way, and make a song which had a sound based around the lyrics and make it really fit in with things. So, if you have psychology, a little bit of psychology, it's on the creative end of it.

Jez: So not just the study of human perception of sound but also some ideas of emotions, emotional psychology. I'm not an expert in psychology so I don't know what you would call that.

s51: If you're a producer as well, though, if someone had a song and you wanted to change it from the original....

Jez: Would you agree then that psychology is part of the music?

s51: Not totally, because there's a difference between making a good mix and making a song, trying to make a song which is emotive around the, it's difficult to say what I'm thinking here but...

s52: I think it's more the artist that's responsible for that than the engineer.

s51: It can be the musician.

s52: Are you thinking of sound spheres and things like that? Technical ways to make people feel emotions?

s51: No, I mean on a lesser level, the producer can often come along and say 'I don't like that section, it doesn't fit in with the rest of the song, do this because it's a bit more fitting with the emotions of the song', probably thinking like that but it's probably more of a fringe issue though, that.

Jez: Psychology in brackets [on the board], next to psychoacoustics. Right, the last thing I want to talk to you about is what you think the nature of your employment is going to be. What does that mean? Well, what I'm thinking of there is, for example, is recording engineering a job for life with great perks and a company car and pension? [laughter] No! OK. The question then is do you expect to have regular reliable employment? Are you looking forward to good rewards? I can see a few people tentatively nodding their head.

s52: You should always strive to cover your back in terms of making sure that you've always got work. Just to assume that you'll have a full time job in engineering I think is daft. You've always got to make sure that you're top of your game.

Jez: Are we talking now specifically about recording engineering?

s52: Well, in anything. To assume that you're always going to have a job particularly in the way of this type of industry. You make one mistake and no one will hire you again.

Jez: You talk about hiring. Are thinking in terms of people being freelance?

s52: Well, yes, a lot of it is going to be freelance because you can't go into a job interview like you would in an office.

Jez: How many people here, when they've got their dream role or the role that they realistically aspire to, think they're going to be working freelance and how many people think they're going to be salaried on a permanent full-time contract? Put your hands up if you think you're going to be working freelance. That's unanimous! Actually, not quite.

s53: Well, I'm sort of in-between.

Jez: The vast majority of people think you're going to be working freelance.

s54: It's certainly an industry where you have to continually re-skill otherwise you could be left behind, like you said it's changed a great deal in the last twenty years and I know that it will continue to do so, I think. So it's one of those industries where you fell into a rut of thinking that you had a secure job and you just turned up and did that for ten years then you could find that there's no demand for what you're doing anymore and then, when you go to look for another job, you could find that you've been a bit left behind. So I think there's elements of wanting to be a bit more freelance or a bit more project-based so that you can keep up to date with the current evolution of the industry.

Jez: So the point that's been made down at the front is that this is an industry which is subject to big change and therefore we might end up in a situation where our skills are out of date. It's an industry where we're going to have to constantly re-skill. Is there anything that can happen, coming back now to this list of our ideal university course, which will help us to better deal with change? Better deal with needing to re-skill?

s55: Yes, physics and acoustics are always going to be the same. Sound is not going to technically change.

Jez: Right, so there are certain things which are unchanging and if you have an understanding of those then you will be able to re-skill better. Would people agree with that? [nods and murmurs of assent].

s56: And with software, I know software's going to be constantly changing all of the time and is going to be out of date, but as long as you know the basics of how most of these, Logic and Pro Tools, work, from the next one you're only going to see improvements: the whole basic use will be the same. I know this is my mixer, I know where my inputs are going and everything and how you cut and chop. So, knowing the basics of software I'll think you'll be fine as well.

s57: I think the only thing out of that lot that's going to stay the same is the science and the music and the maths, because they've been the same for hundreds and hundreds of years and they're not going to change.

Jez: So it's these, well, traditional subjects I suppose isn't it? It's the maths and the physics and the music. Is there anyone that would disagree with the idea that by having a thorough grounding in those...

s58: I think also that electrical won't change either.

Jez: It's all related to the laws of physics.

s58: Yep.

s59: We've put electrical and electronic as an understanding of the equipment, rather than the physics.

s58: OK, cool.

Jez: Finally: does anyone want to say how they're going to go about getting this job, this career that they want. What are people's plans? Some people would prefer not to share those and that's absolutely fine. But if anyone has got an idea of how they think they, or a typical person, will go about trying to get the kind of work that they're interested in.

s57: I think you have to start at the bottom and work your way up.

s59: It's not what you know, it's who you know, definitely.

s57: That's what I mean, if you start at the bottom.

s59: But you don't really need to start at the bottom though.

s60: If you're saying 'start at the bottom' then what's the point of doing a degree in it? Doing a three year degree to start at the bottom when you could just go straight into a studio without a degree and just learn in the studio.

Jez: So, do people here think that having a degree is going to help you in doing what you want to do?

s61: It's got to give you an advantage over the people that don't. People are going look at life experience as well.

s62: Well, the degree itself gives you the networking. It opens the doors to things that, coming off the street, you wouldn't get.

Jez: So, even just being here, a bunch of you guys in lectures together, because you're going to go off and work in the sound industry, you know each other and you'll have had interactions already so even thinking about you as a group, the fact that you've networked together already means that this is one of the advantages. Is that right?

s63: I think it can lead to a more well-rounded potential employee as well.

s64: Life experience does count when it actually comes to getting that crucial job. Speaking for myself, before I did music technology in college I didn't even know that DAWs existed. I didn't know you could do that stuff with computers.

Jez: So you've actually learned a huge amount about what it is.

s64: In a few years, yeah.

s63: I think it does make you more well-rounded as a potential employee. If you're looking at an applicant, maybe someone's got a good deal of creative ability but then if you've got someone else who's got that ability plus they've got a degree behind them and can show that they've been able to prove themselves in a few different areas. In this module this is more about the professional things, essay writing and referencing, things like that which shows that you can go out and do different aspects of work that they might need you to do as part of your job.

Jez: So you've got a wider skill set.

s63: Yeah.

s64: But, in other modules we're doing Max/MSP at the minute, aren't we? We're doing bits of everything.

Jez: So you do feel that you are getting a general grounding in stuff that will come in handy?

s64: Yes.

Jez: Is there anyone that doesn't think that having a degree is going to be of any use?

s65: It isn't going to help at all because, no matter what degree you've got, it's not going to take over experience. You can walk out of here having had a first all the way through and you go up to, even a small, studio and say 'can I have a job?' and they will go 'what experience have you got?', 'I've worked with two small bands', 'well, come back when you've got more experience'.

s57: They want big names, these people.

Jez: So there are two separate things aren't there? There's the qualification, the bit of paper, and there's the experience that you get when you're acquiring that bit of paper. So, hands up if you think the bit of paper is going to help. Hands up if you think the experience is going to help. I would say a minority put their hands up to agree with 'a bit of paper', the majority put their hand up to say experience and there are a few people saying 'a bit of both'.

s66: I think, with how competitive it's getting as well, more and more people are wanting to do this sort of thing. I think if you can go in, and you've got both: with this degree that we're doing, we've got the opportunities to get the experience as well. They're doing work at Central Station, so that people who want to go into live sound can go there through the uni and then get that sort of live experience and get the degree as well. You've got the studio there, so if you want to do studio work and record bands then you can do that as your experience. You can get both things out of the degree, whereas if someone just goes with 'work in the studio' and then say two people go for the same job, one's got the degree and got the experience and one's just got the experience, it's hands-down going to go to the person with the degree.

Jez: So the idea at the front is that there is a kind of inflation at the moment. Even if you don't necessarily need a degree to do what you're doing, the fact is that if you've got the same level of experience and no degree and everyone else has got a degree, which is becoming more and more the case then that might count against you as well so, in that sense, you're saying that the piece of paper itself, as well, is of use?

s66: Yes.

s67: But it's nothing without experience.

s57: If you have experience then it lets people know that you're not going to flounder and if something bad goes wrong you're not going to stand there and have a panic attack, you're just going to get your head down and get on with it. Which is what they want to see, they don't want to pay someone to have a panic attack half way through a disaster.

s68: The thing you have to be aware of with inexperience is that they don't want small names they've never heard of. You could have a hundred people that they've never heard of and you won't get that far, whereas you could have one big name and you're through the door.

Jez: Because you've got a name?

s68: Yeah.