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APPENDICES
Appendix 1: Interview Schedules (1991-1993)

1. Now let us start with a general question. What would you say 'higher education' means in general? What do the words 'higher education' mean for you? How do you see it? Why did you choose to do it?

2. Think back to the time when you were making a decision about what you wanted to study. What was it about University A (University B) that made you want to come here? What is it about the Programme? Course? place?

(For University A students - were you eligible to enrol at University B?)

3. What is it like to be a student at University A (University B) this year?

4. What stands out for you about the Psychology Programme (the courses) so far? What? What does that mean? How? How does that relate to your learning?

5. Can you tell me about something you have learned recently? What? How? How do you see that? What does that mean?

6. Could you give me another example? What? How?

7. What would you say 'learning' means in general? Could you say a bit more about that? What does that mean? How did you see that? etc.

8. The example you gave me was from your study in the Programme, (learning outside the University setting). Could you tell me of another instance of learning outside the university setting? (from your study in the programme?) What? How?

9. You have told me what you think learning means in general. Now learning, or different aspects of learning have been an area of content that you have studied in the programme (course). Can you tell me a bit about that? What? How?

10. Do you think maybe there is a difference between what you have learned about learning in the Psychology Programme, (courses) and what you think about learning? What? How?

11. Can you tell me about something you have understood? What? How?

12. What would you say understanding means in general? What? How?
13. How do learning and understanding compare?

15. What about memorising, how does that compare with understanding?

16. Is it possible to memorise and understand something at the same time? How can that be done? or Why not?

17. Is meaning something important when studying, for instance, when you are reading or writing?

18. What is meaning? How does it compare with knowledge? What is knowledge?

19. How does teaching relate to learning? Does teaching always lead to learning? What does it take for this to happen?

In 1992 and 1993 the schedule was adjusted to account for the fact that students were engaged in their second and third years of study. In 1993 the schedule was extended to include questions about students' plans for their careers and future study. For example they were asked if they thought that their study had prepared them for the career of their choice. The data that derived from these questions was not the focus of the current research.
Appendix 2: A Sample of the Data (Peter, 1991)

The following transcript was generated in an interview with Peter in his first year of study at University A. The transcript has been "cleaned" to remove any personal information that may identify either Peter, or his friends, or the University. Peter's experience of learning provides an exemplar of Learning as Relating, Understanding Where. His principal focus is to apply knowledge with understanding and to seek further situations where what he has learned can be applied. (I and S represent me (as interviewer) and Peter respectively.)

I1 ...can you tell me a little bit about when you left school, what you've done since?

S1 OK um I left school in '86, no '87 and I've done a three year course at um xxxxx College of Art. I did a BA in fine art there. Um I finished that and a lot of my, I majored in painting and minored in uh drawing and in a little bit of sculpture. And a lot of my work was centred around body language, human movement and um eastern philosophy, and I've sort of wanted to learn more about that and um I decided to do behavioural science, so yeah.

I2 OK, um did you leave school at year 12?

S2 Yeah.

I3 Right. Um, was, was there some, was this in addition to your art work, or was there some dissatisfaction? Like what were the, what was the basis of the change? It's an unusual change.

S3 Well at the time it didn't seem all that unusual to me. It was a progression of ideas. I was very interested in um understanding people and um what with the philosophy and body language, and human movement etc. So it seemed like a pretty um straight forward carry on with ideas and at the time I was going to apply a lot of it to my work as a painter. And um that's sort of fallen by the wayside. I've become more and more interested in um the ideas that being um I've come in contact with here.

I4 OK I'm going to probably come back to that in a little bit. What would you say in general higher education was, is?

S4 Higher education is, um, I don't know um school I guess, um with, then I went to xxxCA that was very unstructured and the onus was very much on you. You had to learn, you weren't being taught and I found that really good.

I5 So are you saying that higher education is having the onus on you and?
Oh yeah definitely. Like it's up to you, it's, you're learning things, you're not, like at school you're being taught things, you're having the information given to you and it's just up to you to process it. Whereas when you're um learning you've got um, you have to, you're given the raw facts and you have to find out more about this and what parts interest you and gather information yourself and then you process it. So there's a lot more um things that you have to do which I find it a lot more enjoyable.

So you take control?

Yeah.

Did you do uh, you've, to some extent I suspect you've answered this question but I'd quite like to check that out. What was the reason for you um undertaking higher education? Say this program?

This program?

You've given me some answer.

Well as I said, to gain more knowledge about what I was interested in. Um, to gain a greater opportunity to acquire a job and um I guess to learn. I guess I'm the type of person if I had the money I'd be continuously studying.

Right. So the job wasn't the prime factor?

No.

No um, OK you're practicing art continually, you're going on with that?

Yeah.

Yes, right. When you were looking at what you were going to do this year, after your art program, uh what made you come to University A? What was it about the University that made you?

Um well I've had a couple of friends who have been here and I've come up occasionally to use the library etc. And um I find the atmosphere is a lot um less clutter, it's not as cluttered at University B and it's very friendly and open. Like you feel, like I immediately felt at home here after xxxCA etc was. Whereas the times I've been over to University B it's very formalised and structured and that's something I hate.

Are you talking about xxxx or are you looking at University B?

University B.

Right. So you see that as far more formal? Could you have gone there if you'd wanted to?
Um, as in my um results?

I14 Yes.

S14 Oh yeah, no worries. I had a fairly high TE score and my passing and getting credits through um college boosted it up. I would of been able to get in no worries.

I15 Right. When you say you knew this campus, so it was the campus more than the program?

S15 Oh no, I wouldn't say that. Um I've had a bit of feedback about the program before I started and um from what I heard I liked it. University B was very um, not, wasn't based on learning as, like most of its other courses it's very structured and you, it's more along the lines of um. I can't think of the word I'm after. Um (pause) it's not, it wasn't practical, as practical.

I16 Right, it was more theoretical you're saying?

S 16 Yes, a lot more theory. And um, whereas this course, it's um there's theory, a lot of theory involved but it can be practically applied and uh that's what interested me as well.

I17 Right. When you say you knew, you knew something about, oh well, something about the program struck you, what, that was the practicality of it, rather than the?

S17 Yeah, and um a general idea of what was involved in the program, a very general idea.

I18 Um the design of the program with the work and health and psychology components with um. Were you aware of the work and health?

S18 I was vaguely aware of the, I knew there was a section on it and um I knew there was um, it could be applied to industrial relations etc. And um I could see how that sort of worked in with psychology so that didn't worry me all that much. But the main reason was that I wanted to do uh psychology.

I19 Hm, and you still want to?

S19 Yes.

I20 OK, has the program lived up to your expectations this year?

S 20 Um, I think it's gone beyond them actually. I've been really um happy with what I've seen. Like everybody seems very willing, well almost everyone seems very willing to um go out of their way, well everyone seems very willing to out of their way but some people are more approachable than others. That's a better way to put it.

I21 You're talking about the staff teaching team or the students too?

S21 Um, the students and the staff. The entire group of people I'm interacting with, coming in contact with.
Had you expected that or?

Um, yeah I think so. I didn't expect it as much from the staff. But I think that's partly because um well I came in contact with it at the College of Art, everyone's very open easy to approach etc.

It was a fairly similar environment to some extent anyway?

To some extent yes.

OK, um right, we've almost moved into the next question anyway. What has it been like to be a student this year?

Elaborate.

Yes!

Um, it's been enjoyable. Um it's opened my eyes about a lot of other concepts that um I hadn't, not thought of, but paid attention to um previously. And um it's been very interesting.

So that's um, looking at the program itself and the content of the program?

Content, etc.

Yes. You said a little bit about um the class, the students and the fact that everyone has been helpful about things. Could you say a bit more about how you see the class relating to each other?

Um well everyone's very, well most people are very outgoing and if they weren't before they've definitely turned that way. Everyone's sort of had an effect on everyone else. They've started to open up and talk more and you get a lot better communication than what I think would be available in most other institutions.

What were the factors though, d'you think?

Um partly because of the University environment. Um the teaching staff here and um definitely, well the teaching staff ...... definitely had a huge influence like he has, he has this um ability to get everyone working and start getting the group interacting which is very good. So um you see people break up into smaller groups but they don't adhere to those groups as um strictly as what you'd find in other places. They sort of, they're really willing to meld to form a larger one, interact as that large group.

Right, right. Um OK, how, has anything stood out for you about the program this year? Again you may have mentioned it already.

Stood out? Um, well as I've said the, the way the teaching team have been, the team and um.
You mentioned some, it opened you eyes, concepts, it opened your eyes. Could you say a bit more about that?

Oh, um let's see. Well it was at the College I was very broad-minded there and uh I think it's expanded, more self developed, as more information, as I've learnt more here. Yeah I've sort of um filed it away as something else to relate to and it opens up a little bit more of the world. Like you can um understand a bit more, and um gain a little bit more knowledge about things from applying what I know to various things.

Right, right. To take that a tiny bit further could you focus on something that you've learned this year and tell me about that?

Um let's see. Well when we were talking about um neural processes and um the various um, oh God...

Pathways?

...the pathways and the um oh acetylcholine, those sort of things.

Could you tell me, could you focus on it, and tell me in more detail?

Well one of my um, a friend of mine, he suffers from um something very akin to xxxxxxx. And when I was learning more about this like I'd, I understood it before and I could apply some knowledge to what I was learning at the, with the course. But as I gained more and more knowledge from the course, there was uh, it opened up a lot more what I'd already experienced and I was able to. I did further reading, I was encouraged to do further reading by a couple of the tutors and um I understand my friend a lot better and um understand the mind a bit better for that experience and what I've been learning.

So you yourself undertook further study on that topic?

Yeah.

Could you tell me what it was you actually learned? I mean, say in terms of, you said it showed you a lot more about your friend.

In terms of, um let's see. He's um been going to a psychiatrist and um he was telling me about one of his um interviews with him, one of the counsellors. And um he was saying what the psychiatrist was saying and um how you've just got an imbalance such and such, here take these, this should help and if it doesn't, um tell me, get in contact with me and explain what's going on etc. And he was telling me about this and um then he started um saying what he's been feeling and he was talking to me about that. And I felt I could sort of, I understood what he was talking about. Like, well not understand but have an empathy towards what he was saying and um I could apply it. Um so he asked me well what do you think? You're doing psychology etc ahh, um I sort of went, I don't know enough. But as I was talking to him, like he was talking about various neuro-transmitters and um what's going on and just the little bit of what I'd been learning. And he said, oh right, well nobody's told me that so that could have
something to do with it. And I said yeah. And he was really happy like the um psychiatrist hadn't taken the time to explain what was going on or what could be going on and um I'd helped. Like he didn't understand himself, like he only knew he was having these, hearing voices and his really abrupt changes in personality, like one minute really placid like he usually is and then next he was very aggressive and um abusing no one in particular, like just the world in general. And he sort of oh OK and sort of grasped what was going on a little bit better.

I36  OK So what did you learn from that? (Laughter)

S36  (Laughter) Um, a little bit of um the way to go about counselling I guess. A little um, how to not, I know how to listen etc but I'm developing it, developing how to put across you know I'm friendly you can talk to me, I'm willing to listen, if I can I'll try and help. And it gave me a chance to sort of not so much play psychologist but um just to listen, um developing certain communication skills and um sort of putting order to things I have learnt and being able to apply them. Like focus on various things pull them out of little filing cabinet and apply what I knew.

I37  OK. Could you give me another example or tell me about something else you have learned in the program? It doesn't have to be in the program.

S37  Mm, something else I learned. Organisational groups etc.

I38  Hm, can you tell me about that?

S38  Well the way groups interact. You have various um types of groups as in um chain of command, they're high, high interpersonal groups or other groups that sort of thrust upon them. The members are sort of thrust upon each other and not very cohesive, and cohesive groups and non cohesive groups and um various things that um form, help make these groups more cohesive. And how um a cohesive group can either work very well or um not very well depending on the environment they're in. Whereas a non cohesive group will be spread out a lot more and you'll have members working a lot better than other members, and members working a lot worse. Um, various things that occur in groups like um group think and um how you're more inclined to, groups are more inclined to either make very um radical decisions or um very conservative decisions. Instead of just middle of the road um they're inclined to go more one way or the other.

I39  Right, what, what would be the significance of that learning for you?

S39  Um, if I was um acting as a counsellor or something, being about to understand the process with the group I'm working with. Understand what's going on in that group. Um being able to generate uh talk and discussion within the group. Um becoming more efficient I guess as counselling groups.

I40  You said, if I was. Have you, have you seen any, has there been any situation where you can have applied some of that or not?
Oh I guess any time you become a part of a group you can apply the, um just sitting outside in the coffee lounge and you're talking you can sort of watch and see what is going on.

Are you conscious of doing that?

Um, sometimes I make a conscious effort if there's something that catches my eye and I think oh yeah I can apply that and sort of make a conscious effort of trying to figure out what's going on. But other times I find I'm doing it unconsciously now and um I guess that means it's becoming more engrained, which is good.

You've given me two examples of, of um learning in the program. What would you say learning is in general?

Learning. Well I've already said there's a marked difference between learning and being taught. Um learning is um gaining knowledge and uh being able to um process it and um store it in a way so you can use it later, at a later date.

Um, when you say process it. What, what d'you mean by that process? What does that process for you?

Process. Well um remembering it for starters, remembering it. Um, then being able to see what where it applies, where it is applicable to as in other knowledge you have, other learning you have and um being able to, not so much categorise it but um see what it is associated with and then being able to store it, remember it and bring it out of your memory and apply it to a certain situation you find your self in.

Right, when you say um, there're a number of things you said actually. Words like associate, relate, apply. Um, I may have added a couple there but uh are you conscious of doing that when you're wanting to learn something. Is there some way you go about that?

Um, I don't think anyone can be wholly conscious of what processes go on but um you have to, there is an effort to do it because if you make the effort to um like associate things together then you're more likely to remember them. Well I find I'm more likely to remember them.

Say, you were at the lecture this morning on?

Um, yeah, yeah.

Right.

Most of it.

Yes of course you were because you told me I didn't ask for xxxx. Um, for instance sitting in that lecture um when you were, when the information was coming, the knowledge, um were you conscious of any particular thing you were doing with that?
No not really. I was recording, writing down key points and um I guess I was thinking of, yeah I was thinking where they tie in with things we've been taught, work before etc. That's about it.

OK um, in the program certain areas, certain topics are associated with learning rather, are learning, some of the content areas are about learning itself in the same way that some of the content areas are about groups or ANOVA or Chi squared or whatever. Uh can you recall or tell me about uh any particular areas you've seen about learning in particular?

Um, oh God.

Take your time.

Yeah well you got um, um all your behavioural approaches um, operant conditioning etc, classical conditioning, the other psycho-dynamic approaches, um the dispositional and um the other approaches. All those things you can um apply to behaviour, you can apply to um the way people learn as well. Then you've got um Skinner etc, classical, operant and um the other forms of learning processes that there are. And the way they um, they all influence, they have different ideas that they all um well I see different aspects where they inter-relate and um, let's see.

My next question is, you've told me what you think about learning and what you believe learning is. D'you see any kind of similarity or difference between what you've learned about learning in the program and what you think about learning?

Um, from what I've seen so far I think the ideas I've taken in to this course about learning um associate, no, meld fairly well with the ideas that have been presented here. Um, the way the course has been structured you know, it is up to us to learn um and some of the approaches I've learnt they do um, um stand up to my ideas.

D'you think there is a modeling going on of what they're teaching?

Yes definitely.

OK. Um, you talked about, well you mentioned understanding I think um. Could you give me an example of something you think you've understood, you're aware you've understood?

Of this course?

Hm.

Um, let's see. Lewin's force field analysis. We were taught that in week 5 or 6 by ...... Um she was, she went through that and I sort of grasped the concept fairly well. I understood what she was talking about um. Would you like me to go into?

Yes.
Um, well you've got two, you um I can't think of the proper word, you, qualitative problem, like pull it apart and view all its various aspects of the problem and you set up a um little table basically. One side's got driving forces and the other side uh restraining forces and you put your um problems that you have, various aspects on either and see how they weigh against one another and you um begin to work on um the restraining forces. Because if you build up the um driving forces then the restraining force is going to build up as well to equal out. So you work on the restraining forces and um eg if somebody is a restraining force you talk to them and um find out what's going on and try, if they fail to understand what's going on, then you help them to understand what is going on if that's the problem. And um then you synthesise the problem back together, synthesis the situation back together until you come up with a coherent whole and Lewin's force field analysis helps you to achieve that coherent whole.

Right, so um, and you've told me what that is. Um, um what, for instance, again was the significance of that for you?

Um, the significance of it. It could be applied to people. Um I guess I'm a fairly social person and I interact a lot with other people. So since I've found that, that a lot of interaction is in group form then it's a way to apply something I've learnt here to group form, to how groups interact and um if, like um help if there is something wrong within a group or um. I guess it's um doesn't um apply directly to what I'm, I'm doing at the moment but it's something that interested me. It caught my imagination and I thought of possible uses for it and that and um so it sort of stuck in my mind very clearly.

When you said it uh it interested you, it caught your imagination um, what?

I thought that was going to be picked up on. (Laughter)

(Laughter) I see I'm predictable. Oh is that um, d'you often associate those things with understanding?

Um, I think you have to have some sort of imagination to be able to understand things and the way they relate with what's around you. Otherwise you're going to end up a very closed um approach and view of life and things around you if you don't have an imagination.

Could you, could you, I. Could you tell me how you think imagination plays a part there? The reason I'm, we're going off in a slightly different direction from this, but you're the only student who has ever mentioned imagination (laughter) and understanding. And my guess is it's to do with your art.

Yeah.

So could we just explore that for a short while?

OK um let's see. Well in understanding something you have to, um well as I said apply it to various things. And if you have um, if you're structured, sort of structured sort of personality or whatever, then you're going to um, well convergent thinker, you're going
to um have certain ideas on where that's applied and you, and you will not um think of anything where it could be applied usefully outside those set constraints. And if you use your imagination then you're going to um be able, it's going to form a different perspective on ways to handle other situations. And like it might not be helpful but it might also, so it's useful to um sort of diverge away from what is generally accepted. And, just be able to have something else to fall back on, something else to apply. And imagination is sort of like being able to delve into what you know and think oh that could be, like it may not um be thought of there but I could do such and such and if I did such and such then it might work and um that's sort of, I guess diverged away from what's generally thought of, or what.

I60 Right, when you, when you are studying, learning are you often aware of finding yourself looking at it slightly differently in that way?

S60 Yeah.

I61 It sounds like it's more?

(End of tape)

S61 Um to experiment with everything. Don't be satisfied with what you've got, try something new. And um because you always find something new and different that will work for you. And um, so I guess what, when I'm studying something or just trying to um understand or just looking at something I can um see different possibilities for it. I can um, one of the problems we had in the tutorial, the um divergent thinking one, the different uses for a button. Yeah, and everyone is thinking like markers for board games and just sew on a shirt or something, as far as I know I was the only one who came up with using it as a projectile for a sling shot or something. (Laughter)

I62 Right. (Laughter)

S62 Like um there's so many different ways of looking at the world and if you want to understand and learn more then you're going to have to experiment with the way you look at it and the way you apply things to it. And I think that's very important if you want to get more out of whatever it is you're doing.

I63 OK um, (pause) um, I want to explore that but I think I'm going to have to come to this. I may take it up another time. We'll see. Um, we, we've been talking about understanding and I'm, having gone away from this, I'm not sure. Have I asked you to tell me what you think understanding is?

S63 Um I think so yes

I64 Yes, yes, we. (Laughter)

S64 (Laughter) I think that's how we got into the imagination part.

I65 That's where we got into that. Yes, imagination yes. How d'you see learning and understanding? I mean in what relation?
Um, let's see. When you're taught something you're um, you're, there's less, there's a greater chance of not understanding what you're being taught. Because you're not going at your own pace. You're not um being, you're just having the facts presented. There they are, that's them, learn them. Good! But if you're learning, being asked to learn things, then having the facts presented, then you're going to have to go through and fit them in with, not so much fit them in, look at them and analyse them, like look really hard and pull them apart and see how they interact with each other and what you know and as you gain more and more knowledge of what they're capable of doing then you're beginning to develop an understanding of them.

Right so that's that process you were talking about earlier, when you were talking about learning and so it was almost um one runs into the other I'm hearing you saying?

Yes.

Yes.

Um I guess I'm getting a lot of this from philosophy. Um there's, they meld, you don't have one thing sort of that's it there and that's it there. They join, they have, they have, everything has to inter-relate for you to gain...

Right, OK, I was presenting with a linear model and I see what you're saying.

Um, memorising. I guess that's the final process where you um, once you've understood it and learnt it, then you, it's um your ability to store information until you need it at a later date.

Um, are you talking about some conscious process or?

Um, it's both. You um it's, well you're making a conscious effort sometimes and other times um you're not making a conscious effort. You're just, it's been said and you just remember it. It just slips in and it's locked in there. I seem to be doing that. I seem to do that fairly often. I don't have to make a great conscious effort to remember things.

What about say preparation for exams or something like that?

Um, up until second semester I would have said what preparation? Um, I sort of, I might read through a book or my notes and that's it. But um I go fairly well.

So first semester that's what you were doing?

And this semester basically until I got my results back from work and health. (Laughter) I decided I think I might actually do something, do some study this time.

So up until then it hadn't been too bad a result?
I74 What grades were you getting?
S74 Um, let's see. The lowest I got was um 63%.
I75 So that's a pass?
S75 I just missed out on a credit
I76 It's not quite a credit is that right?
S76 Yeah.
I77 And that was last semester?
S77 Yeah.
I78 And the work and health had you not done so well with?
S78 Yeah this last exam...
I79 Sociology?
S79 Yeah, I got um 15%. Which I was not happy about at all. No, 15 out of 30, so that's 50%, which I wasn't very happy about at all. But, I sort of expected it because I didn't completely grasp what was um going on so that's. I should have made an effort because I realised that. But I sort of stuck with what I was used to doing.
I80 Are you, are you, you found, you talked about association. You found that kind of whole process has worked for you well until now, have you?
S80 Yeah.
I81 Right.
S81 Very well so far. (Laughter)
I82 (Laughter) Yes, right. Um right um, what, one of the questions here again that I think we've probably covered, covered it to a large extent but uh where did meaning fit into your your ideas about learning and understanding?
S82 Meaning?
I83 Meaning when you're studying and reading.
S83 Well you have to have some idea of the meaning of things for you to be able to understand them. If you don't grasp the meaning of what's going on around you then you're not going to be able to understand it at all.
I84 Right. So what is meaning then for you?
Um I guess it's a way or a path to understand things.

That tells me more of the process.

Yes.

But can you say what you think it might be?

What it might be. It's a difficult word to, um let's see.

If something has meaning for you?

Well it holds some sort of, it holds something for you, it holds a um, something you hold um, that is, something you hold, not dear but.

Are you talking about importance or value?

Yes. It holds a value for you. That's the word. And um you, you use that as um, incorporate that value and gain an understanding etc.

So um I'm still not quite clear what, what that might be and it might be quite hard to get any clearer. Um, if um, for instance, has there been a lecture recently that has some real meaning for you?

(Pause) I can think of what you're talking about but I can't think of a way to explain it. Like the meaning is, I've used it in conjunction with understanding but it is different from understanding as well. It's, you can understand, you can, something can hold meaning for you, hold a value or um so that it is important to you without you fully understanding what is part of it.

What about your art work? I mean is that an illustration of some of that perhaps?

Yeah definitely. Um like I've been trying to resist the resort to, well not resort but um delve into.

Isn't that part of what you're saying?

Oh yeah. It's um, my art work has a lot of meaning for myself, and it is important to myself and I understand it. But other people they understand it but it doesn't hold the same meaning for them. So I guess you can apply that as an analogy towards it. Yeah. It's um.

Your understanding and their understanding might be quite different?

Hm.

So?

And so the meanings might be quite different as well. It's up to the individual to interpret um certain aspects of things they see or view or come in contact with. And the
way they interpret it also alters the meaning and their understanding of it. It's um getting out, people getting out certain things from um something you come in contact with.

I94 That's, that's meaning?

S94 Yes.

I95 Are you saying? So understanding, in relation to that getting out, is what?

S95 Um, understanding is being able to apply that meaning again etc

I96 Right, I'm conscious we've just done that, just that process.

S96 Yes. (Laughter)

I97 Alright, um last, last question. Oh no, not quite, um where, where d'you see meaning say and knowledge fitting together?

S97 Meaning and knowledge? I think I said something about this earlier. Um, at the risk of reiterating um, meaning, you have to have some sort of um understanding, meaning, grasp the meaning of certain things, and that's the way you apply it and your understanding of it and various other factors build up into um knowledge.

I98 Yeah, OK. I'll leave it there because I think you've answered the last question.