EXPLORING THE DIGITAL CITY
3 NOVEMBER 2006 SESSION FOUR - TAPE 3

LORENS: … about bins, there is another infrastructure and that is the infrastructure of the binning of information which is completely at variance with all that we usually think of as infrastructure which is the good old comforting stuff which people like Corr talked about. We can look at, we can trace those roots and we would have a completely different understanding of the structure of the city, wouldn't we? Every time you put your card into something or every time you do whatever, you know, those are the roots.

GRAHAME: It sounds terrible!

LORENS: Apparently anyway.

GRAHAME: I think actually that Foucault, the perfect picture of heterotopia according to Foucault was the ship, it was miniature, it had its own code and [inaudible], the connected empires, you move things around and the ship moves and all the rest of it. I think there are heterotopic networks, so the colonial system is a heterotopian network and I think that a lot of the information systems that we deal with are heterotopian networks and I haven't really thought of this before but probably there is a heterotopic network of illusions that when you think about it are the entertainment spots that you go to and use, they invade your home every time you turn on your TV or open up a newspaper and they say come to whatever to do whatever, take a cruise on a ship would be a perfect one and Disney owns ships so yes, I think there are heterotopic networks and I think that's where, that's my offering I suppose to the infrastructure side. We always think of infrastructures as railways and so on and they are physical but now we have a displacement system of [inaudible] that is a heterotopic network in its own right and has its own ecology and psychology and we are very liable to fall for it unless we, I mean unless we are totally paranoid we are going to – I mean I would love to go to Las Vegas but I also love to come to Dundee, so go figure. Exactly.

JANE: Can I just pause this thing? I think there has been somebody … my line of questioning, repetition being one of them, that heterotopia is a power and otherness and whether we are happy or glad, happy or sad, in a heterotopic world, I think there are really key things that have come up and there are probably others that we might return to. But if we might just hold those that I've seen anyway and you should all of course hold on to the things you have thought of in a discussion so we can have some kind of continuity perhaps in the afternoon and join with me and once again thank Grahame.

[Applause]

JANE: I think we are reconvening at two so lunch is here.
There will be coffee at some point, I don't know when that is but when that is we can decide whether to just grab it and come back and keep chatting or have a wee break, we'll play it by ear. So it gives me great pleasure to

introduce a close colleague, Richard Coyne, who is … Oh sorry, it is not such a close colleague at all! [Laughter] Leon and I have met because we were in Melbourne at the same time for at least a decade, I was there at the same time Leon was but we were in different institutions, in different disciplinary frames, but I do know of Leon and in particular of the important role he played at RMIT in Melbourne in terms of establishing, in consolidating one of the top Australian architectural institutions and in particular, what I do know of Leon is that he has in every way both in Australia and in his practice and being a researcher, I think that is an incredibly important role to play, not least because it means restructuring the way in which [inaudible] audited and circulated and so rightly he has been awarded the Neville Quarry Prize for Architectural Education because of that work and possibly as an Australian this means more to me than to anyone else but he become an AO, an Australian Officer, which is one of the highest awards that's given for community service in Australia. He has published *Mastery in Architecture, Becoming a Creative Innovator in Practice, Wiley 2005* and his latest book is *Design for the City of Melbourne, again Wiley 2006.* And he is working on two new books, *Spacial Intelligence* and *Procuring Innovative Architecture.* Today he is going to talk to us about Real and Virtual Environments. Leon van Schaik.

LEON: Thanks Jane, and after that wonderful morning, when we were teaching together at Yale, it was the third member of the team, Ranulph Glanville, who is now the old man of cybernetics but at that stage was the angry young man of cybernetics, and of course he introduced us to Harris and Foster and Foster's learning from his whole career was that the most important principle of argument was generosity and Grahame, you seem to have embodied that ethical position throughout your career, thank you very much.
We discussed this a bit beforehand, Lorens looked at the paper, when I heard what this was about I said oh, I'll do something that might be of interest to you and he said well really something really micro would be interesting after that session and this is a very micro presentation and it grows very specifically out of a couple of things that I've had to think about quite seriously while Grahame was talking. I did spend a decade of my life working in what are called slums and which I cannot see as such but in all the work I did in those environments revealed to me how incredibly resourceful and creative every human being is and how they can, even in the most appalling circumstances, provide themselves with a modicum of decency and a way of living. That's not to say that something shouldn't be done to improve their conditions but I think that that may inform what I've got to talk about this afternoon which is a bit about the bottom up side of things that Grahame alluded to and a constant fascination I have with how we can build from every human being's intelligence towards some kind of order which makes sense at different scales. I am aware though that there is a big psychological difference between Grahame and me. Grahame has gravitated towards the centre of the world's most powerful imperial power …

GRAHAME: It's the end of the Empire. Sorry.

LEON: And my great friend, Paul Carter, I'm sure you know as well, both seem to have chosen to accept some sort of exile on the mud flats as Melbourne which are almost as flat as the mud flats of [inaudible] relieved by a little mountain range in the distance, and look at these things in an almost deliberate way from the other side up. Of course Paul Carter's great books are about the migrant experience and the extraordinary way of living in a new country turns you into someone who sees everything to the surface. If we could penetrate more deeply into life in those countries, and I am always a little bit shocked when I hear that United Nations statistic that fully 2% of the world's population live in countries other than the one they were born in. It seems so few, a tiny proportion and yet so much of the history of the world that I've experienced is to do with the diasporas, some brought about by the British Empire, some by other forces.

Anyway, all of that brings me to, also what Grahame does has forced me to realise I'm not really a mobilist. I am probably an architect and I probably operate mentally in a very much smaller scale as I probably demonstrated on Wednesday evening. This is a little story about some, it started about five years ago and in the background I realised also lies in experience with the 3D computer aided drafting system called RUCAPS. Has anyone here experienced RUCAPS? A great British invention of the 70s. It was said to stand for Real Universal Computer Aided Production System but those in the know knew that it stood for Real-Life University Computer Aided Production System, having been invented by the one [inaudible] that wasn't a very big university and it was when computers still had those big disks that would go flick-flick and so this huge system, we would type all our drawings into it and clients would stand bemused in front of this big roll that would print drawings out and the significant thing about this system was that if you moved a column in your plan, it also moved in every level of the building which was absolutely thrilling stuff. However, because it so relied on one mini mainframe computer there were all sorts of problems and they were constantly flying in experts, they came from Edinburgh for some reason. I suspected at that time that the whole thing was barking up the wrong tree and what we really needed was something that was operating at this level and broken down and analysed as each individual person was working on it. My final solution through [inaudible] came when I typed in a wall that was 32,000 millimetres long and I didn't know it but somebody arrived from Edinburgh and said, 'Surely you must know that 32,000 equals infinity' so the entire building disappeared! [Laughter] There are 32,000 beaches around Australia by the way which possibly accounts for the fact that it took so long for the Europeans to find it.

When I was in the Chancery at RMIT there was an attempt to introduce what is called an Enterprise System, you probably all know what those are. This was an attempt to top down deliver a completely all embracing computing system for controlling the affairs of staff and students, providing a teaching and learning system, everything all in one. I was sceptical about the possibility of it succeeding thanks to my experience of RUCAPs and indeed it did not, it was just as a big a failure as the one they tried to implement at Cambridge. It was one of the few occasions when my estimation of Cambridge and [inaudible] have been in the same paragraph but I was very intrigued by some of the possibilities of it and working with a colleague who is an architect, Tom Kovak, who was represented in that very big exhibition at

the Pompidou on Non Standard Architecture, he is a great friend with Hani Rashid and we very excitedly and in the wake of this collapse of the Enterprise System, looked at what Hani Rashid had done for the virtual stock exchange in New York. Now that still runs, still ran – in fact the whole reason why that actually worked is because it could use that vast bank of computers that they have there, but here was an architect using a virtual model of it which could be examined in real time and re-run in real time so you could do action replays of trading on the floor, actually look at the trading posts from above, with that axonometric bird's eye view and see which of the columns was running hot and you could pull it up and examine what was happening there, why was that particular set of shares so much in demand or the opposite? It was a very fascinating project and Hani Rashid travelled around the world giving lectures on it at that time and emphasising that he thought he saw in this floor architecture, an application of architectural – they didn't describe them as methods but I suppose they are architectural methods, they are very much the sort of things that underlie our training, the three dimensional thinking, the ability to analyse events and all sorts, the ability to sketch and map them. All of these things have been brought into play and had delivered to the clients something that was indeed very useful but ran on a massive bank of computers. I said to Tom, what could we do? Could we make some part of the university that we are involved in operate in the same way, is there some way that we could create a virtual university that benefited from architectural intelligence, because as you all know, most of the environments that you encounter through the internet are flat paper based two dimensional environments that are arrayed in space as leaves, there isn't really a spatial dimension and as I said to Tom, we know that in communication only about 20% of what's conveyed is directly in the words and in the figures that are spoken, 80% of it is picked up from other sources. But there is so much more that we pick up from the way we array ourselves in space, how we position ourselves, what happens with our faces and eyebrows and that sort of stuff and you could capture all of that but we could move towards a slightly more enriched environment.

I also know because I was at that time responsible for something called the Integrated Scholarship in the university, that there weren't any systems available on the market that supported the way in which we know people learn. There was a tendency for all of them to assume a curriculum, to assume that there is a right way to engage with the curriculum and a right order in which to engage with the curriculum, when most of us who have been engaged in architectural education, and as you know today Grahame and I definitely thought you should turn it on its head completely and we might end up designing a halfway decent kiosk as opposed to the other way round. So I was very interested too in examining in some detail all of the systems that are available and Lorens said to me, we are trying to design a sophisticated blackboard for one of these systems and I also found that in the corporates and in universities that are trying to do things a little more – a non line learning experience tends to be an extremely learning one and even in the corporates where your participation in a training programme determines the level of your remuneration, there is an 80% drop out rate, hardly anyone ever finishes an online learning experience.

I had the very good fortune to encounter Dr Lynne Robinson who was the operating officer of an organisation called Many Serve in Western Brisbane in

Australia and my university had some shares in it which gave me some access to what they were doing and they'd been trying to do something for general practitioners and they had gone, they had seed funding and the problem that they faced was that general practitioners are dollar poor and time poor, they encounter 30,000 new bits of information about what is happening in the health sphere every day, if they can open themselves to it they would have to deal with 30,000 pieces. In Australia alone there are something like 14,000 deaths through misadventure, which is general practitioners not having the right knowledge at the right time and the right place and this organisation tried to get all the general practitioners in the country to go online and to have access to pre-digested and very well presented content to feed to them what had happened in the world of medical research. The same thing happened to them, they kept going bankrupt because they'd get everyone to sign on, everyone would join up, look at it once and then drop it because everything else came to the fore. She was puzzling about this and contemplating, at that stage, the end of her career at any rate and she was watching a very interesting TV programme that ran on the special broadcasting services in Australia for a while and in this programme they put a TV camera in a commuting train compartment leaving Sydney's Western suburbs and they planted a few actors in the carriage. The actors would come in primed with the day's news and start talking to people in the carriage, 'What do you think about this, that and the other?' and they just filmed this until they reached the terminus, edited it and cleaned it up. And she thought, 'That's what I've got to do. The whole business that I should be designing, I'm not here to design content delivery, I should be designing a setting in which people can actually engage.'

So she started enrolling her doctors in groups of six and she was very strategic about it – she took one from the centre of the city, one from the inner suburbs, one from the outer suburbs, one from the country and so on. Then she planted an avatar in the group and she said to them, right, even though you sign on in a sequence fashion, once a week you have to be on all together for virtual drinks and what then happened was, for example the hormone replacement therapy thing came up and instead of saying to all the doctors who signed on throughout the country, here is all the information on hormone replacement therapy, the avatar then said, have you seen that stuff about hormone therapy, what do you think about it? And would start a conversation between participants and out of that would come a search from the different individuals, turned the whole thing on its head and it stopped completely being an organisation that delivers content and they became more and more expert at creating the setting.

She is prepared to share with anyone in the world some of the principles that need to be in place if you are going to have a successful learning group. There has to be a collection of willing individuals, they have to have shared goals and at least shared adversity. She described becoming a doctor and being a medical student as a shared adversity. There has to be a shared leadership model, what she discovered was that what works for GPs, certainly wouldn't work for surgeons, it couldn't be transferred to College of Surgeons as general practitioners are self organising, distrustful of hierarchies, the College of Surgeons, at least in Australia, is very hierarchical, highly respectful of seniors, very much that kind of structure so you couldn't invite them to have virtual drinks. So there has to be a shared leadership.

There has to be common processes or rituals or rules of interaction and she said those are different for every group. It did work to get the doctors to come together online for fifteen minutes but you couldn't make it for longer than fifteen minutes and doctors are totally structured around a fifteen minute time slot, their attention span, everything they do in their career. In the doctors case, very entertainingly, they run one annual conference and everyone goes online at the same time and drinks are on the AMA, the Australian Medical Authority, and they run up bills of millions, virtual millions! It has been very successful. It has the final of the publicly shared component for such an organisation, it is capable of generating social capital – in other words it develops, it continues a tradition and people become engaged. Currently they have 40% of all the general practitioners in Australia fully engaged which is an enormous change from where they were before.   She says if two of those properties are missing then you are almost certain to fail. One is missing, failure is 80% certain. She has identified 48 other qualifiers but that she now regards as her intellectual property and she wouldn't share it with us. So I said to Tom okay, what do we do? We went to, of the five years we have been working in the firm, the architectural students who are the equivalent of third and fourth years of the architecture programme and we set them some tasks and some of it is utterly fascinating and I don't have time to share it all with you. The first thing they was they took the university handbooks and tried to divine from them what type of learning structure we had in mind. The result of that were terrifying. Fundamentally every one of them visualised their own experience as a funnel, a tube and you went in at this point and encounter a whole series of topics which you master and you drop out the other end educated. It was just horrendous and we said to them, do you think that's how you actually learn and we started saying could you model how you think you actually learn? They came to us … I don't seem to be able to make that work just now, but what they came up with was a virtual concourse on site. It looks like this, these are like the rings of Saturn and on this concourse those are little spaces which each student can individually offer. Can we have the lights down a minute?

JANE: Sure. There seems to be no correlation between what you do here and what happens!

LEON: Anyway.   This was working before, buy anyway, use your imaginations. Round the edge of these cells that each student occupies, on the inside edge of this concourse are all of the learning opportunities that the university offers, you might call them subjects or topics or whatever, careering around in the middle here are students wandering about, hoping to meet other students and discuss with them which of these topics they want to join in with and study together. So they are looking at what music the students like, what pictures they have got up, what their dog looks like, all sorts of things describing the students and t hen they go hunting for what's on offer. Having been subscribed to something, subscribed to this central ring, what then happens is that the ring becomes a bit like those alpha wave experiments from the 60s that we all remember where you used to, if you can visualise the alpha waves, you used to be able to change how they operated. According to indictors about the way they choose the way it should be done, that wave would move and shift above the line and below the line depending

on how well or badly they as a learning group were doing and by observing this, they could actually feed back through themselves and actually change the way they were going about doing their learning. So it became a self feedback process. So it was self association, self selecting and feedback and of course also the university bureaucrat looking at it from a great height for the possibility of seeing how much they were doing above the line and how much was below the line according to the assessments made by the students themselves.

The model that lay behind it was one where you still found them saying we need real places where people can actually have coffee, meet each other and also at the same time from those real places move to the virtual concourse and engage each other and then come back down, so they set up this dialogue between the real and the virtual. What I am going to show you in the minutes remaining to me are attempts that we made to create an architecture in the virtual which is in some ways as helpful as the real one is, with coffee houses and so on. It's a subscription model, there are all sorts of things that can be explored by that town to which you virtually subscribe, the process of enrolling is then not something that takes place once a year but whenever a group decides that they want to start learning something. They can start at any time, they can start in any order, they can completely organise it for themselves.   Behind this sits, in case you thought it was totally wishful thinking, an operating system so we are working with an open source system which is about to become available and which costs the student about $20, Australian dollars, a year, it gives them free SMS's.   One of the chief supporters of this work has been our Faculty of Business which is very much engaged in part time education of people who are in practice and who are constantly frustrated by the fact that they will rush from work into the City, to the building and find a note saying your tutor is sick today, sorry.   This system, all the tutor has to do is send an SMS and it goes out as an email, it goes out as a web posting, it goes out as these things. So there is a very sophisticated but very effective operating system sitting behind this which enables the circulation of information on the architecture to take place.

That system itself analysed by students is in different zones. There is a public zone where anything in the group which is formed in the concourse wishes to make public can be made public on the website, which is edited through Word, not HTML, so everything is easy to do. At the top is a group, and two students can form a group and have that totally private to themselves. They can grow the group, it is completely rhizomic, to quote [inaudible] and in time students have begun to follow this and it has become more and more sophisticated in envisaging ways in which feedback of how the group operates can be applied.   You will see here many of the components they will be dealing with, messages between each other, pictures they have found, loops they have created as they have done their research, files they have set up, a wiki where they can keep a running conversation about things, a calendar, ability to keep in touch. You get different users, you get what's going on and the whole thing sits completely protected in ways that I don't fully understand I must admit,

Then this group of students started looking at quantifying all the different kinds of messages and information that is passing between them, trying to classify how that all took place in time. You can see the names of the people down the side, these are users, and because we are a very international

university, Eric finished the second half of the semester in Sweden and Luke in Norway and the others continued to be Melbourne based, and they were exchanging all this information. When they started mapping all this information is when they got involved with Rhino and Rhino like forms started to emerge and that is one of the problems that we had in trying to create our picture in this virtual environment, very much the tools that we use in some ways determine the form of it.

Now each of these represents a complete net of points that you see on the right hand side and the relationships between the different types of messages and topics and so on are linked so each day might have a different shape and there is a lot of discussion in the group about becoming connoisseurs of shapes so that you actually begin to look at these things over a period a time. A bit like [inaudible], connoisseurship. I am beginning to understand that that shape means that it was a good week as opposed to that shape meaning it was a bad week. These are some maps of how that sort of things happens and you can see here a simple way of describing what you are looking for using standard kinds of co-ordinates. But one thing that we aren't able to escape from, which we are constantly challenging ourselves with is the somewhat tubular nation of the spatial models that emerge from all of this kind of thing. Now you came to the lecture on Wednesday night and you saw the gallery in which a lot of designs from [inaudible] were displayed and that has some of the character of these spaces that seem to emerge from this work. We don't represent in the corny way that some learning systems do, the little house on the prairie with the pine and the cactus on the windows and all the rest of it. We seem to move into these kinds of spatial worlds, but this is a very interesting stage in the development of these and I have only brought one set of students work to show you.

What you see here is a map in between different kinds of messages and time of the experience of a group of students, each colour representing the different discipline. So that is one discipline, two, three. Then if you look at that, you will find that each topic they are looking at has a different characteristic and that's what creates the frame around which the form of this thing flows. Another way then of describing how they [inaudible] … Then again the aim is to create an instant impression. This is a topic here, I'll take a section of it, it is one investigation of the topic and you start to roll the whole thing down and you begin to find yourself then examining that topic in an almost infinite regression as something which at a more micro scale describes what the experience of studying that particular area of what they are interested in has been so it cascades down and potentially back up the system.

Here there is a piece that is simply looking at the work that Luke in Norway is doing, as he received this stuff overnight from the others. Then they felt this was perhaps a little too abstract so they started moving into landscapes, looking at ways in which a landscape model might help them understand what was going on and they looked at a relationship between the above datum and the below datum and the messages below the datum and the ones that haven't been responded to, the messages above are the ones that have been responded to so you start to get a kind of a valley and hill system where the hills are the places where the interaction between people has been fruitful and the valleys are, shall we say dormant. We did start talking about this on screen box and not everything they discard is necessarily wasted, it might

come back at some point. So there is an attempt to use a landscape model. We also attempted a self grading process using grades, the numerical classification levels of awareness, so that you can see the dangers. I was thinking about one of your previous seminars because it was left to the administrators to classify what the quality of the communication had been and that appeared to be the sole classifying system and we didn't actually look at what … they made a jump in this chart and the grades go from beige being survival, purple being magic and myth, red being power, blue being codification and classification, orange being objectivity, green being eco feminism and all those voices and yellow being, this is looking at the interactions between all of the levels and purple is looking at what comes next. Then we get more stellar things that they've begun to look at, looking at the whole process of tagging, using the internet and the community and the relationships between them, what they are interested in could be seen using tagging. At the end they redesigned the opening page of the operating system which is still, as most operating systems are, the page that you click on to be able to go to another one. We have done experiments where they have tried to complete the transferring of that page onto a [inaudible] and to see all of the options that are in that space but the problem for us still is, one of the constraints that actually determine the architecture and why we didn't just do the little house on the prairie model, is some intractability's remain. This system, that presentation was made by former students of ours now, they have all graduated, many of them have reported this as being the most interesting parts of their educational career, trying to begin to frame the questions anyway about what architecture can offer in this environment but also what a bottom up space might win them and of course we are all aware of the others like My Space and the rest. This is something that tries to tie back to the Many Serve experience and tries to tie back to the relationship between the real and the virtual space in the system online.

[Applause]

JANE: That was a different scale and what was really interesting from my point of view, just in a preliminary summary is one in which you can really see that micro spaces in virtual structures with everyday practices, and I think too something very interesting in terms of that knowledge of power question that came up in the earlier discussion, how to produce a switch on the operation, an indestructible power motions of virtual technology. We are going to have a paper then some questions, so if I could just open this up to questions and then I think the logical one is to become [inaudible] to this kind of thing. Which begs the question, what does the student actually experience? I didn't get that from the beautiful diagrams and shapes and things, I didn't quite see what the student gets.

LEON: There have been a number of things that they based their analysis on and in parallel to this we have had two groups of 70 students who are actually going through a typical further education programme in certain specific skills in architecture and so all of the material that they were using on the operating system was available for them to look at and say, what if we visualised the interactions between them in this way. So that was one model, another was we run a research conference twice a year which brings people from all over

the world to Melbourne and we ask them to visualise what would happen if they could create a virtual continuance of that in the six months in between, so they have all had that kind of experience in working. They were also looking at their own relationships between each other as they actually worked on them.

JANE: If you don't mind me continuing this for a minute. I suppose it is almost more basic than that. At Dundee we use Blackboard and it is set in what I think is a very clunky way, it is a folder and file system that you get in Windows basically so we did the conversion and I'm interested in thinking about how one might organise that experience differently, so what I'm interested in almost is literally what they see when they look at the screen. Is it a set of folders that have files of information in it that they access or is it something different?

LEON: The closest we've come to visualising that is the thing that I showed on Wednesday night which is a very carefully designed gallery where Tom has gone to the point of designing it so that it could be constructed and then in that all of the offerings that are available are available for people to browse through it. It is like being in a real space and then when you get to any one of those you can click on it and go either into the clunky version, if you like, or go into another gallery.

MAN: One of the issues with WebCT which is what we use at the university and I guess Blackboard is similar, for example meetings of students in public places, there is a permeability there and other people can overhear to some extent what is going on and what we have tried to do with our own courses is to actually provide a permeable aspect to this communication between students and to do with course content so that people outside, prospective students, can actually eavesdrop a little on the dialogue. Now it seems to me that there would be nice visual ways of representing that using the system in your literature. Is that something you have considered, the permeability?

LEON: Yes, that's what the context was supposed to be about, which I failed to make work. This whole thing, the space which in the outer ring of Saturn, is an open concourse entry.

MAN: So people from outside the institution …

LEON: There are different levels of subscription. We looked at the frequent flyer where everyone is allowed in but if you want to go through certain doors you have to sign up to the executive lounge! But I agree with you, that's a crucial part of it and that certainly is something which the students I spoke about earlier on thought was crucial. It is somewhere that they can actually both browse with each other to see if they are really interested in working with them and at the same time they can wander round on the inside of that ring and say oh look, this is a learning experience which seems to be two on the list, in the sense that it's not the top learning experience at all, that is chalk and talk. There are students fresh from school who only want the chalk and talk but the model that we have there allows for different levels of subscription.

LORENS: I had an observation, well it was really a question about the drawings that you showed. Correct me if I'm wrong, from what I understood what you're modelling in these three dimensional kind of spiral, circular, fan like forms, I mean this is measuring the amount of conversation or other exchange that is going on between two or more students when they are confronting a topic, is that right? I mean you began with the model of the London Underground and you don't download information on them, you have an avatar that says 'hey did you hear about?' and then the next person says 'Did you hear about this?' 'Well yes, it was something to do with this' and then the next person goes and accesses the website and suddenly a whole topic is explored by a series of dialogues or other exchanges going on and you measure the fullness of the development of that topic in terms of some of the thickness, the distance out on these axes are measuring the amount of activity. Is that not right? So you can see how a topic becomes an information environment which is effectively a kind of forum for communication and you can measure the size of that forum. In that sense it is a small scale but it is also the same scale as well. There are forums for communications and different types of forum allow for greater and lesser volume on that loop, I think.

LEON: The positive side of what I think Grahame is talking about is placing the emphasis on the relationships between people rather than on some big figure of what a city should be and in some ways this works, whoever is engaged in it. How can we enable people to devise their own learning environments, how can we support people as they find their own way to do things rather than saying this is the right way, this is the right order? I mean Alvin [Inaudible], it has been mentioned a few times in the last few days, is reputed to have said on his deathbed 'There will be no curriculum system'! [Laughter] I have that ringing in my ears a lot. Most of the forums that go on in education seem to centre on the curriculum and what lies behind this, the possibilities behind this is rather like that school in Germany where when people apply to do, I don't think they have architecture but they have most of the other design disciplines and they try to do something, they say here's my portfolio, I want to be a graphic designer and if the portfolio looks promising enough they are accepted into the school and then absolutely nothing happens. There is no curriculum, nobody comes and tells them to do something, they are just in the studio. They start off by going, 'What am I suppose to do?' Well, work. And the way in which they then proceed out of the place is that they can take a portfolio back and say I am now a graphic designer and this august group of professors look at it and say, well no, not quite yet, go back and do some more work. The whole school operates in that way.

JANE: What school is that?

LEON: Cologne I think, Cologne School of Art.

[All talking at the same time]

LEON: I have attempted to research that and I don't think it's entirely a legend.

MAN: Alvin used to talk about the supermarket of ideas, that the students would wheel themselves around the aisles and pick out the things they needed and then eventually decide if they were architects and then they would pass out the school but a lot of them would turn back.

WOMAN: But this is how art education traditionally worked because there was no curriculum for artists and this is the big, I mean I come from Germany, the big fight at the moment because we still have the Academy system which says that artists don't need a curriculum, you cannot teach what an artists knowledge or whatever is and there are other people who want to reform the system and say we need to teach these people something! So this is …

LEON: The point I was trying to make was that the reform is more interesting when it is about discovering how we can use all of the opportunities that are springing up to enable useful, to them, relationships between people rather than trying to define a curriculum. If you try to define a curriculum for architecture there was a Tasmanian academic who spent some time working out how long it would take to go through a curriculum that did everything from the damp proof course to the membrane in the roof and he said it would take 32 years! It just doesn't work that way. The part about this also, Lorens, which is undercooked in their work and which is potentially very interesting is an attempt to express more clearly what the qualities or level of the links between [inaudible] … there is a lot there in self assessment which is quite useful.

WOMAN: Just a quick question and an observation. I was watching some of these, I was struck by the quality of some of this and I was wondering if he would like to comment on the aesthetics because some of them actually remind me of some works of software for example. I have been intrigued by this element in particular and the other quick contribution is to do with the fact that from the examples that you described, the university one, the one about the doctors, it looks to me that the key for the success is the idea of the virtual community, that we recreate. This is of course a well known study phenomenon in media studies, richer communities and so forth and there are again different schools of thought about it and we do present today one of the more optimistic examples if you like of how successful such richer communities can be in creating and fostering the sense of belonging and putting together ideas and fostering conversations and discussions, so we are seeing that positive side to it and how it works.

LEON: To go back to Lynne Robinson …

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