EXPLORING THE DIGITAL CITY
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Speaker Lance Strate, President of the Media Ecology Association and Professor and Associate Chair in the Department of Communication and Media Studies, Fordham University, New York; editor of *The Legacy of McLuhan* +
Speaker Andres Guadamuz, lawyer, Lecturer in E-Commerce, School of Law, University of Edinburgh and co-Director of the AHRC Research Centre for Studies in Intellectual Property and Technology Law +
Chair Neil Spiller, Professor in Architecture and Digital Theory, Bartlett School of Architecture, UCL; ed. of *Cyber Reader* & author of *Maverick Deviations*.

LORENS: … Three speakers we have. In order of their appearance we have got Lance Strate. Andres Guadamuz and Neil Spiller. Now before I introduce them properly or more extensively than that, I would like to just say a little bit about what we are doing here. And Nick Fife is my kind of collaborator in this and he said Lorens, keep it short. So I will probably try and fail to do that. The first thing, I mean I will keep it short because most of you were here last time. And probably have heard most of this. But there are a number of people who are here for the first time who I would also like to welcome. And I think for their benefit I will just say a bit about what we are. This is the second of four seminars in a workshop called Exploring The Digital City, Space, Culture and Politics. And the intention behind them is to bring a group of researchers interested in questions of urbanism and the impact of digital technology upon urbanism and specifically to bring together people from many disciplines. So that we have here geographers, people from politics, sociology, the new media and architecture. And we were fortunate to receive AHRC network and workshop funding for this which is primarily why we have been able to hold these workshops. I should also that if this is sponsored by the AHRC it is also sponsored by the faculty school of architecture and the department of geography and the interactive media design unit in the sense that they have all contributed numerous amounts of time and effort to this. I should say a word about the Geddes Institute for Urban Research which this workshop is the inaugural event for. Nick Fife and I and Greg Lloyd from planning who unfortunately isn't here today were asked by the university to lift the Geddes Institute out of the school of town and regional planning, to lift it out of that and to make it a cross faculty research institute. Something that would stay in the faculties of this university and also which would establish links to other universities around Britain or around the world. And we are in the process of flaunting that thing. We are actually very close to making a formal proposal to the university about the management structure for it which will probably include a director, a management committee and an international advisory board. We are getting close to submitting that proposal to the university. And this workshop is really our inaugural event of the institute and its intention is quite simply to foster opportunities for collaboration and research in [inaudible] 4.00

Now I am probably going to say something that I haven't said yet. I should just say that if you look at this in the program that I said this is the second. I just want to say that the first session was called Moving In New Space which looked closely at questions raised by new media. There was an installation that I was a part of with a number of other collaborators for a chap named Paul Sneider who was here. The next two sessions after this which I hope everybody will be able to come to. Although obviously certain people have shown up today which weren't here last time. We may lose people. Our intention is that most of the people who are at this thing will be at all of them. Because it is precisely to get people like the new media who are mainly most interested in the first session, to talk to the people and say in the last session on policing and politics, it is precisely that kind of synergy there we are hoping to format.

Now our first speaker is Lance Strate. And Lance is an Associate Professor of Communication and Media Studies at Fordham University in New York. He was introduced to me by Paul Guzzano who I mentioned was one of our speakers last time. Paul Guzzano being a kind of media activist from America who in some way had met Lance. Lance is also President of the Mediacology Association. And has edited the MAA's journal and also co-edited a number of books. One of them I have is called The Legacy of McLuhan. I understand he is also publishing a new book on mediacology shortly. Lance's interests or a lot of what Lance has done is to further kind of explore a lot of the ideas in communications and media that were developed by Marshall Lacewing in the 50's, 60's and 70's. And as I understand it the mediacology kind of group movement, discipline I should say has kind of emerged out of the media and communication studies of Marshall McLuhan. Lance has also told me that he is very interested in Louis Mumfred which I didn't realise and that a lot of the source for, for the most part really a non-source for McLuhan's ideas on technology comes from Louis Mumfred's interest in technology and in particular in electricity. Now I hope I have done you fair there. I am now going to move on to Andres Guademuz who is a lecturer in e-commerce at University of Edinburgh and a Co-Director of the AHRC Research Centre for Studies in Intellectual Property and Technology Law. I understand from speaking to Andres that he publishes two kinds of papers. Very kind of technical papers on gnarly issues. Real issues related to intellectual property. And also papers which attempt to reflect on these issues and insert them into a sort of order, a cultural context. I was lead to Andres really through a sort of chain of people who it is now no longer in my notes but primarily kind of tracing a link that went through the creative commerce movement. Someone in Creative Commerce Australian, Damien [Ameson] and Creative Commerce here and then that sort of eventually came to Andres who I think has also been very active in the creative commerce movement.

So we have got now somebody today who will be speaking on media and the kind of space that media makes. Then we have got somebody, Andres speaking on how, I mean I have no idea what you are speaking on but this is what I think maybe you are speaking on, on how intellectual property, how ideas if you will, ideas obviously represented in media, how they are policed.

And I can see links in my own mind to how, you know if we can allow that that makes a kind of space, I can see clearly links between that and how space is policed and that certainly will link up to our fourth session in September. On the subject of space however I would like to mention Neil Spiller who is our third speaker who has also agreed to chair today's session which I am very pleased about actually. Neil is a Professor in Architecture and Digital Technology at the Bartlett School of Architecture which is the UCL school., where he also runs the diploma unit 19 and runs the MR program which is kind of Peter Kutchall's flagship program. He has recently formed a group called Avatar Lab which is an acronym for advanced virtual and technology research. And those of you that know him probably know him through his writings. He has edited and authored a number of books on contemporary movement in architecture and on Cyber Space. He is the editor of these two books, Cyber Space 1 and 2. Actually the first one is probably called Cyber Space full stop because when he wrote that he didn't know there was going to be a 2. And a number of other books that he has authored. I think digital dreams and visionary architecture are two of them. I have known Neil probably for ten years because I used to teach on a part time basis at that [inaudible] Although in the way of colleagues that you know because they are your colleagues and you sort of teach next to them, I have to say I know him kind of from afar primarily through his students work. Primarily through seeing the work on the boards as it where of unit 19. Which I have always likened. I have always likened viewing that work to standing on a precipice and looking down on a very vast landscape and realising when you look at these landscapes that even if you don't know what the student has said about it, you know don't know narrative, even if you are looking down on it, it's a silent narrative, seeing these kind of drawings which are these kind of vast landscape narratives which I have always found to be both utterly compelling, utterly spatial and very, very resistant to the kind of easy identifications we usually try to make them look at what we think of as an architectural drawing.

So I think that is all I am going to say about our speakers. I mean they will probably say something much more interesting about themselves when we start to speak and probably I want to stop now except to say that... I have been thinking about the question of space recently. And space is a very odd thing. I mean it is kind of like sticking your tongue out the window and tasting nothing. It is sort of like completely and utterly not there and yet we are also completely and utterly immersed in it. It is always around us. And I was very taken by something, I read a paper by Lance Strate recently where he starts by saying that 'Marshall McLuhan, like Homer, always began in medius reg or in the middle of things.' And kind of that rung a bell with me because probably the only thing I remember from my school studies of Homer is that he started in medius reg and I think the point about that was that media, if you are going to study media, you have the problem that you have to study something you are always already immersed in. Okay it is not possible to form a kind of objective relationship with an object which is usually the kind of relationship we want when we scrutinise something. And it is very much for instance the problem that psychoanalysis has in the scrutiny of subjectivity. It is not possible to

objectify the subject in psychoanalysis. Because it is precisely the subjectivity that precisely we are immersed in. Lecons, as a footnote, used to say that all of Freud's writings have to understood as self analysis and that far from that illegitimising Freud's work, that is precisely what made it so valuable, precisely the fact that it was self analysis. It wasn't an attempt to objectify the psyche. And it occurred to me that this is exactly the problem we have with space. That we are kind of always already in it and any way to try to understand it we have to do it kind of from the inside.
So I am not quite sure that is an introduction to our first speaker Lance but I thought that perhaps it was a way to think about the problem with space. Lance are you ready?

LANCE: Sure, I guess I speak from here?

LORENS: Well if you would like to sit up and address us or you are more than welcome to stay here.

LANCE: Well it might be better in terms of space. There are better and worse ways to speak to people. Thank you Lorens I think for that introduction. Thank you for inviting me. If there is anything I say that you find to be erroneous or unacceptable, I hope that you will hold Lorens accountable for this. I consider it an honour to be associated with the Geddes Institute for urban research. Geddes is a significant scholar for mediacology, a field with inquiry that I have been involved with for many years. Mediacology has been referred to as a North American intellectual tradition because most of our or many of our most central thinker are of the US and Canada. Some of us, especially those of us from New York City point to our fellow New Yorker Louis Mumfred as the first major mediacologist. In a less politically correct era we would have called him the father of mediacology. As you know Mumfred was a pioneer in the study of technology. Its history, its impact. He was also a pioneer in urban studies and architectural criticism. More than that Mumfred considered himself a disciple of Geddes. And I want to read you a quote from Frank Novak Junior. He wrote that 'Geddes demonstration or how certain biological principles could inform the study of human culture ultimately had a critical far reaching influence on Mumfred's thoughts and writing. Trained as a biologist in the laboratory of Thomas Huxley, Geddes became interested in relationships existing throughout the natural environment. Plant, animal and human. Geddes notion of the human ecology was important in shaping both Mumfred's both method of historical analysis and the scope if his interests. In fact Mumfred claims that Geddes went further than any other philosopher in laying the ground for systematic ecology of human culture.' So, given the relationship between Geddes and Mumfred, you might even say that Geddes is the grandfather of mediacology. That is if we were still using terms like that. But I should tell you however that our Canadian colleagues tend to disagree with us New Yorkers. You know how those Canadians are. And they disagree on the paternity of mediacology and they argue that if anyone is considered the father of mediacology it ought to be Canadian political economist Harold Ennis. Now,

Ennis was also heavily influenced by Geddes and so I guess that would make Geddes both the paternal and maternal grandfather of mediacology. That is if we were still talking in that. Geddes is sometimes credited with coining the term 'human ecology' although other things it is attributed to Robert Park. But the credit for coining 'mediacology sometimes goes to Neil Postman who was my mentor. Sometimes to Marshall McLuhan who Lorens mentioned. McLuhan was a Canadian of Scottish ancestry who earned his doctorate in English literature from Cambridge. He taught at St. Louis University and at Fordham University as well as the University of Toronto. And in the sub title to his 1964 work 'Understanding Media' McLuhan referred to media as the extensions of man. Which of course is no longer politically correct but if we can say that media are extensions of the human it would follow that mediacology is an extension of human ecology which would Geddes not only the grandfather of mediacology but also as well the father of mediacology if we can still talk that way. Which we can't which is unfortunate because that would probably require years of therapy to get over. Of course others would argue that it is actually Plato who started it all with his Phaedrus where he talks about the dangers of writing. Some others would even point to the five books of Moses containing the first media equilogocal insight in its concern with graven images and the point I am trying to make is that our field mediacology has no ertext (?), no moment of birth or single founding father or mother. Instead we understand it to be an open system, a network of scholars and intellectual ecology. The term mediacology was formally introduced in 1968 by Neil Postman who defined it as the study of media as environments. Postman later explained and I will quote 'you will remember from the time when we first became acquainted with a petrie dish that a medium was defined as a substance within which a culture grows. If you replace the word substance with the word technology the definition would stand as a fundamental principle of mediacology. A medium is a technology within which a culture grows. That is to say this form to a cultures politics, social organisation and individual ways of thinking.'

Now I believe that Geddes would have appreciated this explanation as a biologist and ecologist he understood that human beings were just like any other species which means that we cannot fully understand ourselves unless we first understand our habitats and environments and we may enjoy an unprecedented degree of control over our environment but we are hardly the first species to be modifying our environments. In fact you might say that the ability to alter the environment is the distinguishing characteristic of life itself. By taking in energy nutrients, expelling waste products not to mention by reproducing, all organisms change there environment. We tend to think of evolution in terms of the species adapting to the environment but species also adapt their environments to themselves so that it is the relationship between the species and the environment that evolves. It is the ecology that evolves. Now technology is part of the natural process of life. It is part of environmental modification. And neither is it artificial, nor is it even limited to our species. Mumfred makes the point that our own prehistoric technology's pale in comparison to the complex technologies of bird nets, beaver dens, bee hives, ant hills and their life. I am sure you all know that in 1943 Winston Churchill

famously remarked 'that we shape our buildings and afterwards our buildings shape us.' You probably don't know that in 1967 McLuhan's colleague at Fordham John Culkin, offered a variation on that and he said 'we shape our tools and thereafter they shape us.' Buildings and tools are both methods of modifying our environment. Whenever we do so, the effects feed back into ourselves modifying us. Building of tools are both extensions of ourselves. Buildings are extensions of our bodies, especially of our skin. Tools are extensions of our hands. As extensions these technologies mediate between ourselves and our environment. And whatever media we place between ourselves and our environment becomes our new environment. So mediacology is the study of media as environments but it is also the study of environments as media. Our building shape us because they mediate our thought perception and behaviour. As educators we know that the traditional classroom, chairs lined in a row, limits interaction among the students. And you have them sit in a circle, that facilitates interaction. Sitting around a table like this tends to result in a more formal interaction than sitting just in chairs. But it's not classrooms or buildings that I want to talk about today but the city as a medium. As a technology the city evolves out of earlier forms of human settlement. Obviously there were no cities when we were hunter gatherers within tribal societies. There were no cities before the agricultural revolution. Which means that before we could invent the city, we have to first invent the country. Which would service the cities rural environment. Now if the city is a human invention that appears at a certain point in our history, it would be fair to consider the possibility that the city might become obsolete or if we were to invoke another biological metaphor, perhaps the city might become extinct. Perhaps it's a dinosaur. Is it possible that the city is already obsolescent which means that it is out moded and on the way out. Admittedly it is hard to consider the question given our heavy investment in the city, both materially and symbolically. But rather than dismiss the question I think it is worthwhile to take it on and see where it takes us. And actually I first posed this question in a part I wrote in 1996 which I presented at a conference that was held in a place that no longer exists. It was in the Vista Hotel later taken over by Marriott that stood between the twin towers of New York's World Trade Centre. The destruction of the hotel along with the twin towers serves as painful reminder of what in which the city is obsolescent. With its origins in the citadel, the city is a military technology, a technology of defence. Much like a shield or suit of armour. But the modern city is indefensible. Our home nest is no longer achieving safety in numbers but presenting the most tempting of targets for anyone wishing to achieve the maximum number of casualties. The vulnerability of our population centre is also related to their complexity which makes them especially fragile and open to breakdown. Now the horror of 9/11 brought home the fact that a small group of individuals could potentially bring down an entire city. But the obsolescence of the city as a military technology really didn't start then. It can be traced back to Hiroshima and Nagasaki. Before that even to Dresden, to London and to Guernica. Of course the city wall as Lorens reminded me, the city wall as a technology of defence was defence was obsolesced a long time ago. I don't mean by the way that I am the first to pose the question of the

cities obsolescence. In the first chapter of his 1961 study of the city of history, Louis Mumfred asked the question 'will the city disappear or will the whole planet turn into a vast urban hive which will be another mode of disappearance.' And the idea of the city covering the entire surface of the planet I believe was introduced by America's most prolific author Isaac Asimov. It was also recently visualised by George Lucas in his second Star Wars prequel trilogy. But apart from science fiction McLuhan noticed that air travel had already effected merged the worlds cities into a continuous urban environment. You consider that we travel within a metropolitan area to an airport, move from one waiting area in to the aeroplane which is basically another waiting area where we, that is what we experience sitting in a hermetically sealed waiting room. And after a time we leave room, find ourselves in another airport in another city. And this way without transitional spaces or the rural environment, the city vanished in plain sight. Like the city – I want to return to the earlier point. I want to stress that media always have military applications and like the city, the computer and the internet have evolved out of military initiatives. And while the 9/11 terrorists demonstrated the obsolescence of the city, actually that same obsolescence significantly reduced the effectiveness of their attack. They targeted the twin towers not only because of the dramatic appeal and population density but also because they represented the financial centre of the US. Has the attack occurred just a decade earlier, the destruction of New York's World Trade Centre would have dealt a crippling blow to our economy. But even by the time of the first car bomb attack in 93, the actual financial centre of the US was no longer located in the real estate of lower Manhattan but was distributed across the cyber space of our computer networks. And although the shock of 9/11 hastened an economic downturn, our financial markets were up and running in relatively short order. So 9/11 demonstrated the obsolescence of the city as both the military and financial technology. And while aviation played a role, what I want to concentrate now is not so much on aviation, is computation on the ways in which digital technologies have undermined the city as media. Clearly telecommunications offers functional alternatives to real spaced and situations. That is where Howard Rhinegold gets his term virtual community and long before that McLuhan talks about the global village. And along the same lines Mumfred wrote that systems of communication constitute an invisible city. What I want to do therefore is explore the relationships between cyber space as a product of computer technology and see space as a product of urban technology. But equilogocal thinking requires more than just a sense of place. Whether evolving or in a state of equilibrium, environments are dynamic. They exist in time as well as space. So urban technology also produces city time and computer technology gives us cyber time. Taken at face value, McLuhan's characteristic that media as extensions reflect a certain space bias to use a phrase from Ennis. A bias towards control and domination and as Mumfred notes, 'a decidedly masculine, phallic orientation to extensions.' Mumfred also makes it clear that these types of technology tend to dominate our consciousness, tools, weapons and so forth. We tend to overlook entirely the basic technology of the container. For example the Palaeolithic use of skins

and shells and the Neolithic invention of pots, bowls, jars, bottles and so on. As media containers are less like extensions than other type of technologies. But they are more like environments. Moreover containers are characterised by what is called the time bias. A bias towards preservation and continuity. And what Mumfred would call feminine and maternal bearing. Containers are feminine or mother like. Without container technology, specifically methods of water storage such as irrigation and wells as well as innovation such as bards and granaries, we would not have had the agricultural revolution. A surplus reduction of food created the problem of spoilage. Containers provided the solution and in turn encouraged population growth and concentration. On a larger scale other forms of container technology became possible including fixed dwellings and permanent settlements such as villages and cities. Mumfred refers to the maternal enclosure of the village and the city and along the same lines we speak of the metropolis which means mother city. As the various forms of container technology made it possible for village communities to evolve into cities, so the city became the ultimate container. As Mumfred puts it, 'the ancient city was nothing less than a container of containers.' So as container and meta-container, the city is time biased, preserving information about the past and promising continuity with the future. And in fact the sense of historical time communicated by the city which is visual, specialised discontinuous, possibly schizophrenic has been described by Frederick Jameson as a key characteristic of post modernism. But what he fails to acknowledge is that it has been with us since antiquity. Also containers serve as mixing bowls and melting pots. The city walls may insulate urban life from the outside world, but they also act on that life and transform it. Since the city is a container of containers, the process of blending together the contents must begin with the breaching of those other smaller vessels. As the saying goes we make the omelette by breaking some eggs. The result is unprecedented synergy but also heightened risk. And among the containers dissolved and digested by the city are the safe and stable entities such as the tribe and the village community. By bringing together in one location what had been previously scattered over space, the temple of human life quickened, the rate of change increased resulting on the cliché of the fast pace of city life. Time sped up as it bounced off the walls of the ancient city. Urban centralisation and speed made possible forms of control and co-ordination inconceivable in tribal cultures. And the impact was not so much explosive as implosive. And Mumfred describes I will read to you a quote, 'the many diverse elements of the community hitherto scattered over a great valley system and occasionally into regions far beyond were mobilised and packed together under pressure behind the massive walls of the city. Even the gigantic forces of nature were brought under conscious human direction. Tens of thousands of men moved into action as one machine under centralised command, building irrigation ditches, canals, urban mounds, ziggurats, temples, palaces, pyramids on a scale hitherto inconceivable. As an immediate outcome of the new power and mythology, the machine itself had been invented long invisible to archaeologists because the substance of which it was composed, human bodies had been dismantled and decomposed. The city was the container that

brought about this implosion and through its very form held together the new forces, intensified their internal reactions and raised the whole level of achievement. So what Mumfred argues is that the first machines were organic. They consisted of the centralised organisation and co-ordination of human labour. Only later with a fallible and fragile human parts he replaced by more reliable artificial ones. But what is true for physical labour also holds true for mental labour. Intellectual efforts could be centrally organised and co-ordinated. For example through concentration in a palace or a temple. It therefore follows that if the city as container could give birth to the city as a machine, it could also bring in to the world the city as computer. The city in fact I would say is the first super computer. We might call it a macro computer as opposed to a micro computer. The city is the first medium for gathering story and processing information on a scale that transcends individual human experience. And like the electronic computer, the city computer could not function without a special artificially constructed language. A language that would make it possible to program the city computer. That special language which was writing. In turn writing in the notation laid the groundwork for contemporary computing and programming by making it possible to develop highly abstract and analytical thought, formal symbolic logic along with algebra, geometry, calculus. The writing of cities co-evolved in a relationship that is symbiotic as that between computers and programming languages. The closeness of the relationship had much to do with the fact that writing as much as cities is linked to container technology in numerous ways. Consider for example the forerunners of writing. Given the fact that prehistoric containers were opaque it would make sense to develop a way to identify the contents without opening the container and breaking the seal hence increasingly conventionalised markings and notation. As container technology facilitated surplus production and storage systems. The idea of private property took hold. And with it identifying markings to indicate ownership. In turn the hoarding of surplus goods required a system of accounting and tallying inventory. In these and other ways notation technology was needed to deal with the effects of container technology and it did so by utilising the same materials as containers technology. The first writing surfaces were stone and clay and was developed by accountants. Moreover the first writing system cuneiform, evolved through increasing abstraction of containers. First from about 800BC tokens were used as a system of accounting. A variety of containers were then developed to store those tokens, culminating around 3300BC in the use of seal clay enveloped for safe keeping. The problem with the sealed clay envelopes is that you couldn't tell what was inside. So to do the accounting and to then break the envelope open just kind of messy and a waste. So what they started to do was put duplicate tokens on the outside of the envelope as well as what is on the inside. Actually I find that history almost like a Monty Python routine where they keep coming up with a better idea only it takes them a century or two each time to do that. But eventually the figure out that they don't have to actually use the tokens on the outside, they can just make impressions of the tokens and then put them in and seal them. And finally they realise that they don't actually have to put tokens in at all. They can

just use the impressions the tokens make and that would stand for the tokens which stands for the goods. Eventually they went for making impressions into just making marks with a stylist that looked like the impressions of the tokens. So notation has its origins at least in part of the surface of three dimensional containers and envelopes but it eventually substitutes for the physical container in a shift from three to two dimensions and from the concrete to the abstract. So writing becomes a symbolic analogue of the physical container, especially in the form of the list. In any form though writing is a system for storing and preserving speech. And therefore storing and preserving information. Speech itself, the technology that defines us as human beings is also container preserving experience allowing for easy storage and retrieval of information in the human memory and providing us with categories that act as conceptual containers. So it's writing as a system for representing and recording spoken language which is a container. Writing is also a container of containers or a meta-container. The Cambridge anthropologist Jack Goody suggests that the equation that humanity equals language commonly accepted among social and behavioural scientists should be accompanied by the corollary that civilisation equals writing. Writing in numerical notation systems were a necessary precondition for the emergence of complexly organised highly differentiated societies. Writing made possible the city states and imperial cities of the ancient world. In the free cities of medieval Europe were founded by some of the most literate elements of the futile age, the merchants and the guilds. In the modern era, printings relationship with nationalism gave rise to the capital city, typically where the printing press was located and the city has also always been the centre of literacy. So much so that the words literate and urban are synonyms. Well illiteracy has been associated with the countryside. With the peasants or folk. Moreover consider the highest honour a city can bestow on an individual. A parade during which the hero is showed with what? Writing surfaces. Ticket tapes, faxes, computer print outs, shredded paper. And in a sense there is much more than metaphoric, cities are written, they are written in stone and clay, on papyrus parchment and paper. Whether than can also be written in electrons and protons remains to be seen. I will return to this point. But first some consideration of the topic of time is overdue. Writing has a number of implications for city time. With the ability to transport written messages over space, especially on light surfaces such as papyrus and paper, the volume and therefore the speed of communication has vastly increased. This in turn facilitate the co-ordination of human activities including the functions of command and control and thereby military conquest. Beyond contributing to city times fast pace, writing preserves information in a more efficient manner than human memory. Allowing us to keep chronological and historical records and develop a linear and continuous sense of time. Numeracy was also necessary for the development of systems of measuring and predicting time based on the movements of the sun, moon and stars. And the calendar term is another key technology associated with the rise of civilisation. The writing of calendars, chronologies and histories also enhanced our ability to think about he future and therefore to plan for it. Measurement of celestial time in turn suggested the idea of breaking time down into units such

as hours. Perhaps along the analogy of words being broken down into letters. Thus the calendar lead to the clock. The possibilities for public time keeping were limited in the ancient world but artificial devices such as sun dials did play a role in urban affairs. While rural life is synchronised to the rhythms of the life world of sun, moon and season, city dwellers move to a faster beat. In some way more uniformed, in other ways more irregular and always more artificial and divorced from nature and biological time. It is not surprising then that while the mechanical clock originated in the medieval monetary, it's brilliant option should follow the patterns of 14th century urban development and this is a study that Mumfred did early on. The clock tower became the symbiotic centre of the urban landscape through most of the modern era. London's Big Ben being the most known example. And the clock tower centrality in city space made it possible to synchronise and co-ordinate human activities thereby allowing for an even faster pace and increased complexity of city life. This was further enhanced by the development of the watch which itself became a menanym of city life. The very idea of time keeping implies a link with container technology. But the container of time is also a technology of control. An early version of cybernetics. And as such suggests a direct link between the clock and computer technology. Jay David Bolter is one of the few to make this connection arguing the computer is often seen as an extension of the steam engine but in fact is better understood as an extension of the clock. Computers and clocks are both devices that manufacture no physical products but instead produce pure information. The arbitrary lists of the uniformed hours and minutes produced by the clock means that like the computer, the clock is a technology of simulation. Clock are also early forms, first forms of automatic machinery, self operated machines and therefore ancestors of modern ordination robotics and of course computers again. Thus both the clock and the computer had provided metaphors for the body, the mind and the universe. More to the point the electronic computer actually functions as a clock and this is essential to its ability to carry out instructions and manipulate data. The central processor of the computer contains within it an electronic clock who's extremely rapid pulses determined when one operation has ended and another is to begin. It follows therefore that older technologies of time such as calendars and clocks served similar functions as part of the central processor of the city computer. So the idea of the urban macro computer makes it easy to see the ways in which the computer directly competes with the city and renders it obsolescent. The decline of the city that we have been experiencing seems to have developed an inverse relationship to the post-war development and the diffusion of digital technologies. If provided those new technologies have provided similar opportunities as a city for social interaction, cultural and intellectual cultivation, economic activity and cosmopolitan experiences but of course without any risk or danger. And consider the problem of speed. The fast pace of urban life suggests that there is no city like voracity. Nothing moved faster than photons and electrons. The cyber time is quick time running at hyper speed and this has been described as one of the fundamental properties of post modern culture in the age of relativity, the speed of light is the only constant. Cyber time is measured by the nanosecond, one billionth of

a second. A unit of times passage is centrally imperceptual. Jeremy Rivkin sees this new nanosecond culture as an outgrowth of our emphasis on efficiency and centralisation, our space [inaudible] 47.53. Bigger is better becomes faster is better. We have come to expect the instantaneous so that it no longer excites us. We see no need to comment on how fast our messages are delivered through electronic mail. But it becomes quite natural to sneer at snail mail. What I once found when I was a kid we found it very evocative to speak of jet speed. Refer to cosmopolitan lifestyle people lived in as the jet-set, the cartoon the Jetsons. Nowadays all we seem to do is complain about jet-lag. When the instantaneous becomes the norm, we forget about speed and only pay attention delays. When sitting at a computer terminal, the passage of a few seconds seems interminable. And five minutes an eternity. How can city time possibly compete with the quick time of the nanosecond? Especially since city time has long since reached its threshold of reversal and the pace of urban life has slowed down so much that we no longer notice the irony of rush hour. That it is anything but rushed and so much longer than an hour. City dwellers may still seem hurried but they are in fact quite used to waiting in lines, waiting for taxies and buses, waiting for tables in restaurants, waiting for appointments. Waiting and waiting and waiting. Contrast this to the impatience of the computer user as a program completes its run or files download. Cyber times hyper speed makes it possible to achieve unprecedented levels of synchronisation and control within cyber space. Control is easily extended outward through the computers interface with the physical world. By becoming in tuned with real time, the computer can co-ordinate human and technological activity with unprecedented efficiency. In contrast to cyber times increasing ability to co-ordinate and control, the slowing down of city time is accompanied by a breakdown in synchronisation. For example as travel time in the metropolis becomes unpredictable, the ability to arrange face to face meeting is undermined and starting times for events becomes problematic. City space has become inefficient and cyber space makes it possible and often preferable for organisations and individuals to find alternatives. The electronic computer makes the city computer obsolescent. And it has a similar effect on the city as container. It does so for the simple reason that the city and like the city and like the written record, the computer is also a form of container technology. Now while the word, the term computer focuses our intention on the activity of processing information, this presupposed the ability to preserve information for a period of time. The presence of the container's implied by the idea of entering data, loading programs, accessing data banks. Without some form of information storage the computer does not computer. The appropriation of the word memory by computer scientists brings us back to the oldest most natural information container, the human mind. Also the computers memory is made up of chips which are made out of the same basic materials are ceramic pottery, glass jars. Semi conductors are a direct technological descendant of prehistoric container technology. And like early writing on clay envelopes, computer circuits are ridden or engraved on the chips which are then installed in what is called appropriately enough a mother board. But the computer is more than

just a container of information. Like the city in [inaudible] it is a container of containers. The computer has been described as a meta medium, a medium that incorporates all other media. The computer medium of hypertext contains and links together all existing text into one great network. The computer network known as the internet has been described as a network of networks. In all of its manifestations the computer, like the city is an implosive technology pulling into its micro world all that it comes into contact with. Including the human psyche. So we move from mother city to mother board and from the metropolis to the matrix. The matrix also means mother. But is it possible that computing might fit into urban life much the same as writing pads? The problem is that there is one key difference between writing and computer. Cities contained writing. Writing was never quite able to contain the city. But the computer through its networks can in fact contain, imprison, perhaps entomb the metropolis. To read you a quote from McLuhan 'perhaps the largest conceivable revolution in information occurred on October 4th 1957 when Sputnik created a new environment for the planet. For the first time the natural world was completely enclosed in a man made container. At the moment that the earth went inside this new artefact, nature ended and ecology was born. Equilogical thinking became inevitable as soon as the planet moved up into the status of a work of art. Now the satellite in orbit is circling and containing the planet, gives us the global village, the mother of all containers. And the satellite has been incorporated into computer networks, so cyber space goes to outer space. This electronic implosion is placed to the globe and with it the city into a magnetic bottom. This new meta container like its predecessors has a tendency to break open and break down the smaller containers that it has absorbed. Thus electronic networks render the city a broken vessel. The symptoms are apparent then. The decay of the urban core. The inner city, the flight from the city by the middle class, by business and industry, the gated community. The extension of city spaces is beyond the confines of the city which we have the controversial concept of urban sprawl. In other words the vessel has broken, the shards often seem sharp and threatening. Now if the medium of the city has be obsolescent by digital media in conjunction with other technologies such as aviation, what conclusions can be drawn? Could we wind up with a decentralised network of urban spaces? A city, suburb and countryside are redistributed along the lines of the computer network. Will the city become the environment for the country surrounding the country? Will we see the return of the citadel as safety becomes the overriding factor in development? Or perhaps Buckminster Fuller imagined the future of high mobility in which people would move their homes from place to place commonly. Could the future of the city be the encampment or the caravan following the pattern of mobile telephones? McLuhan maintained that obsolescent media are often retrieved as art forms. If it is no longer required to perform other functions might the city be liberated to serve as a museum and cultural centre? A locus for arts and entertainment, a medium of recreation and socialisation. McLuhan also felt that the electronic media opened up the possibility of programming the environment. The way the television and computers are programmed. Might the future look something like Disney

World? Which is not a bad thing. You know I mean not just a theme park but a totally co-ordinated environment. Might this be the future of the now obsolescence city of New Orleans? It does seem to me that an unprecedented opportunity now exists for the design and planning of human environments. The obsolescence of the city opens us up to new possibilities. While our digital technologies make it possible to design, plan and implement in ways that never before were possible. The question now is whether we can shape environments that will in turn shape up in beneficial ways. In ways that will enhance our survival and quality of life. This is certainly what Louis Mumfred advocated as both the biological and immoral imperative for out time. Thanks

[applause]

LORENS: I wonder, do we want to ask... I would like to save discussion for later but there may be sort of a few questions that we want to put to Lance before pass over to you … .

MALE: Could you speculate a bit more about the future metaphor of the audience. How it conceived of it, how is it static? New Orleans is not moving. Maybe it is evolving in some fascinating way because New Orleans is its people, they are decentralised at what is going to happen.

LANCE: Well it's just, at least the possibility would exist for a co-ordinated effort to reconstruct the city. Because it is already, I mean the words theme park comes up a lot. It already has some of that flavour and obviously there is corporate interest in that. That could be the future. Now obviously it is out moded in the sense of human settlement to a large degree. Of course and the possibility exists, you know on the other hand there are, just because the possibilities exist people don't always take advantage of the medieval. The scholar of medieval technology Lynn White put it that technology opens a door, just not for man. And you know given a lot of the emphasis on, well so I am not sure – I mean I think if it were to happen in the US it wouldn't happen through kind of centralised government planning. It would happen by turning the city over to corporate interests. To private corporation and letting them develop it. We get, but then when you think about we have moved towards larger and larger scale co-ordinated development in that manner. Where I live, I live in New Jersey actually, just outside of New York City and they are developing a large part of what is called the Metal Lands now. Not residentially but there was actually some talk of Disney working on it. Trying to develop it and it was just so far a sports complex into something grander. This would be, you know on a massive scale but it would be one way to deal with that. And I certainly can see Disney which does have that kind of experience in actually turning it into, you know a lot of people would be horrified by that possibility. But I mean turning it into a very co-ordinated kind of centre for culture and entertainment.

FEMALE: I just wanted to ask about your concept of the decline of cities, the obsolescence of cities because it seems to me that when you are talking about

decline, that kind of decline and symptoms you talked about are really isolated to American cities. And that mould certainly isn't the case in European cities for instance of even in Canadian cities. And the evidence from the developing world seems to suggest that cities like Shanghai and Mexico city, Mumbai and places like this are, what everyone can say about them they certainly aren't in decline. In fact that more and more people are moving to cities, creating slums which are a problem in a different sense but it is not symptom of decline in the sense that you talk about. So I wonder if what you are saying is really limited to the American experience of what has happened in cities. And whether the reasons for that can be traced not to have media reasons but to the ways in which American cities were developed and organised from the early days I guess.

LANCE: Well you might be right. I mean my response though would be that in terms of technology, a lot of it, not all of it but a lot of it hits us first because we give it such free reign. We are not always at the forefront of all the technologies but I think on the whole we have given ourselves over to technology more freely than anyone else. So we feel the effects first. I think we certainly felt the effects of television before other places did. And so I don't think, I think it’s just a matter of stages of development. The third world that are kind of skipping over certain stages but they still haven't quite yet, where we are at. I think in Europe part of the problem, not problem I shouldn't say that. Part of the difference is the longer history. So it takes longer, there is more isolation against technology. We don't have that history or tradition and we just don't put up any buffer zones. So we just let the technologies kind of sweep over us kind of freely. So I think that to me would be the explanation rather than a quality of difference between our cities and other cities. I think that the effects that are hitting us will be seen elsewhere. But you might be right. There is now way-

FEMALE: The Canadian cities for instance really haven't experienced the kind of decline that you do see in the United States.

LORENS: I think there is a difference between decline in obsolescence actually. [inaudible] obsolescence, I am not sure if it is the same.

LANCE: Yes I mean I think in some ways simply the idea of the expansion of urban spaces is the more important phenomenon and just that the earth and spaces seem to stretch out in any kind of defined area and we lose a sense of a larger environment for the city. But again I have heard that when Mumfred met Geddes and he wanted to come and study with Geddes, Geddes said no, you have to understand your own cities before you can understand anyone else's. I freely admit to speaking from my experience.

MALE: I was terribly intrigued by the use of the computer as an extension of the clock. That was really interesting because I guess I always thought of it as, perhaps I am being very obvious here, as the extension of paper more than

the clock. There seems to be a perhaps [inaudible] analogy and I must admit that I was terribly intrigued by that. Did you think of paper or do you think it was just as an analogy or?

LANCE: Well sure. Yes, there is no question. I mean the computer really feeds off of numerous different technologies. I was pointing to the clock in terms of the computers operation rather than its function. And also add as a link, a technological link that often doesn't occur to people. We don't see that very clear connection between the computer and the clock. Whereas earlier on people were pointing to the steam engine in terms of its significance in starting a new technological revolution. And once the graphic user interface was developed, that is where you get the computer becoming a new form of writing in particular. Before the graphic user interface it actually wasn't so much about paper but absolutely. I mean you can trace a very clear kind of technological history that goes back to paper but also through writing because writing and numeracy really does go back to digital technologies begin with counting all your figures after all. These are the first digital technologies.

RICHARD: Richard ?? from Edinburgh University. There is also Marshall McLuhan brings out the two major sense between the eye and the ear that impinges on this whole argument because I guess one of his narratives and it is somewhat utopian but it is that the Iliad help swap in the tribal condition and was somehow emerged in sound that was followed by the civilising influence of the eye and we have technologies of paper and print and so on and that story is well established in his legacy I guess. But then also he relates it to time and space I think, so sound is related to time and certainly my colleagues in music and my sound design colleagues talk about time based media, they talk about the computer in terms of sound and the iPod and so on is a new revolution yet again of the use of the computer. So there are some interesting parallels there I think.

LANCE: Yes, absolutely. McLuhan did get into time and space but not as much in some ways as Ennis made more of an emphasis on that. Also Walter Ong who was McLuhan's student stressed that. McLuhan tended to keep going back to space. So he talked about sound in terms of acoustic space as opposed to visual space. You can sort of see that this is visual space. It is all very, all right angles and straight lines and you can see that development. It is actually quite fascinating and last years mediacology associations convention we had a fellow come in who was an anthropologist and he showed us in Indonesia after writing had been introduced to this tribal society, they took their dwellers which had been arranged in a kind of scattered way and they lined them up. And you could actually see the effect of writing in getting people to think in terms of the line. And actually the woman who figured out the origins of writing, Denise Schmandt-Besserat, who is our key note speaker for the next LEA convention, in Boston in June. She has researched extensively how you can see it in terms of art that where before writing is introduced in Mesopotamia and Egypt, images of little iconic figures are sort of scattered

willy nilly. They don't have any kind of sense to them. After writing is developed artwork starts to follow a linear pattern, so a line. So we that we create a kind of linear and quadral linear spaces and that electronics have broken that down. And you can see that again in architecture where we have moved away from straight lines and right angles. So that would be McLuhan's emphasis. It tended to be more on space. But I think that time is really key. You know key element that informs a lot of mediacologists started with sort of like discoveries of both sound. It had this long history of visualism in western culture which dates back to Peter Rayness and is part of the printing culture. But you know sort of discovering that sound is significant and discovering that time is significant as opposed to space. Those are kind of these two 20th century, early 20th century breakthroughs.

MALE: I am not sure if I have formed this into a question. I was kind of listening to the radio this morning and there seemed to be this discussion and rules around the idea of, I think they call themselves a group in like the new nihilists or something like that.

LANCE: The new?

MALE: Nihilists, who were basically, they were kind of protagonists for decline in fact, actually they were saying basically to give an example, a ten year target in meeting emissions and global warming and all that sort of thing. And it takes China ten months to actually trump that. Whatever we need in ten years China will kind of trump that. And I was just quite interested that that has come out in the media and immediately forms a group thing or an idea. This kind of new nihilism, this idea of protagonists for decline. And if we are heading down this road of abject decline and obscurity ultimately completely sort of built global earth. Well I am just …

LANCE: Global earth?

MALE: Yes, the idea that we just run rampant actually. How do you think media might shape or play that or promote it or effect it in some way? It is not really a question it's an observation.

LANCE: Yes well one thing, I mean this is a point McLuhan made is that you go back to the oral culture in tribal situation and people saw themselves as sort of one with their environment. And tended to live relatively harmoniously with their environment. With writing and the visual sense people sort of saw themselves at a distance from their environment and started to talk of nature. The Greeks, the ancient Greeks talked about nature as something other than us. As us as separate and outside of nature. And that in the electronic era ecology, the sense of a movement, a consciousness sort of emerges with the understanding that no we are not separate and outside of nature. We are a part of it and we have to be aware of it. So the consciousness that leads to this depressive movement that you describe is certainly enabled by the electronic

media. Whether it leads, whether people decide to say, to take that consciousness and decide that it is hopeless or that something has to be done is obviously free. It is not that technology determines what we do, it just creates, you know it just leads us to the possibility of new ways of working with things and doing things. So on one hand it does open the door to more co-ordination and more consciousness about what we are doing. And on the other hand though it does allow us to run even further out of control. It does both the same. Time create a kind of new dialectic. Looking at it purely in biological terms I think, yes I was telling Lorens that I saw Louis Mumfred, I had the privilege of meeting him in 1980 and he spoke. I had just started my doctoral work. And he predicted and of all things and just mentioned that the sexual revolution of the 60's and 70's would lead to some new form of disease, venereal disease. This is 1980. Aids had not yet surfaced. I think that one of the things that you have to say is that you know in [inaudible] favour the population of the earth, it just seems way too much. You know it does seem like we are headed, we have to be heading for a die off. If we were to look at it objectively in terms of the species. I don't think we can keep going the way we are. It may take some kind of cataclysm so, you know and after that happens that then these new technologies will enable us to restructure things.

MALE: Yes that was really the core of question was assuming that we are heading that way with technology and media. Make change or effect.

LANCE: Yes, one of the things that, one of the problems is that new technologies don't replace the old ones. The old ones are still there and there is periods of competition. There are periods of heightened energy. One of McLuhan's points, some of the most creative periods in history are when literacy is fresh and that is where you get, I mean that is ancient Greece right. What we look to as this utopian period. The origin of democracy, of philosophy, of science. History, theatre. It all comes out of the moment when the alphabet is introduced into our culture. Our religious origins go back to the moment when the Hebrew alphabet was introduced and you get a kind of flowering of religious culture at that moment. And McLuhan believed that Shakespeare was that kind of moment as well where largely illiterate culture was being flooded by print enabled literacy that Shakespeare kind of was that sort of transitional figure. You know and I think in some ways when you kind of look back. I don't know if it is age or what but a lot of people say that get the sort of mid 20th century was a really great time for our culture and seems to be tapering off now. I don't know if that's the case or not. It's hard to get the distance but certainly I think the kind of flowering that we see in the mid to later 20th century can be attributed that sort of hybrid transitional moment.

MALE: Yes, the point you say there about the new technologies is replacing the old technologies but coexisting with them. I mean I guess that was the issue that was intriguing me all along in what you said and particularly you use the word obsolescence right. Because why don't we talk about obsolescence decline, that there was a sense in which you were talking about things that

were slipping away. But actually they are not always slipping away. They are just either staying there or they are kind of transforming into new forms. And I was thinking, I mean just a very foolish concrete example, if everyone has satellite navigation in their cars, is there a need for the public providing of road signs? Will we one day live in a city where nothing is kind of labelled in the environment. We just look at the computer screen to know where we are going. And my guess is that won't happen because there will be this kind of merging and coexistence of things. And so even, you made the point about decline doesn't work, obsolescence is different but even obsolescence is given the impression of things slipping away. Whereas my sense is more of an endless recombination of the old and the new. And it is something about the permanency of transitional stages in a sense. The permanency of transitional stages doesn't work. But that seems to be more what we are in to rather than obsolescence and going back to what you said, there isn't this sense of decline, obsolescence falling away. There is this sense of either hanging on to and transforming the old all the time. I haven't got a word for it but that state of affairs. And just one minor observation, you gave Asimov as the person you visualise the planetary city and I suppose in one sense that's true but for him it was just a battle of a detective story. But in England most people would say JG Ballard envisaged the planetary earth. The urban earth in historical concentrated city in the 1960's which was an attempt to get at the psychology of it. It looks implausible now but in the 1960's I think it must have been pretty clever to, even the psychology of living in a totally planetised and indeed three dimensional high of the environment. But again I couldn't get Ballard out of my heard while you were talking. But Ballard doesn't seem to play well in the United States. He is not recognised as a kind of significant cultural figure in the States is he in a way that he has gradually applied that status over the [inaudible].

LANCE: I don't know, people who interested in science fiction are …

END OF RECORDING

80 minutes