Digital Space, Social Technology and Virtual Force as Determinants of Design in the 21st Century

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It is appropriate to begin with salient quotes relating to the Interface Paradigm:
'The grand abstraction of man as the measure of all things, as an originary condition, a whole presence, can no longer be sustained' P. Eisenmann, 1986
'Although notions of adaptation are perhaps most familiar from biology, the most important ideas about adaptation in the history of AI are actually sociological' P.E.Agre, 1998
'When several bureaucracies coexist (governmental, academic, ecclesiastic) in the absence of super hierarchy to co-ordinate the interactions, the whole set of institutions will tend to form a meshwork of hierarchies, articulated mostly through local and temporary links' M. De Landa 1998

Keywords: *Interface, Social Space, Virtual Force.*

Introduction

It is always easy to start with a metaphor when one wishes to understand the concept of design process. Design understood in terms of possibility for creation, invention, arrangement and so on within given parameters is what we try to distinguish in our current architectural practice when using various software packages for information transfer onto the surface of blank paper. During the process of transfer of information, from specific knowledge that we possess and with a creative urge towards the drawing we are in connection with our hand and our eyes to an interface, a pencil, a mouse and a screen. Our body reacts in particular way when holding the mouse and looking at the screen where the extension of the hand and its possibility of connection to transfer a line into a series of pixelated dots proposes somewhat a particular hierarchical arrangement that we wish to consider further.

The question of interface in our mind is not only connected with the relationship between the body and the screen but also in the relationship between the decision making process between the body and the software. This relationship provides for a different interface paradigm to emerge where a variety of semiautonomous, semi-intelligent software agents can start having in some ways an ability to learn about a user's habits. As a consequence these new software programmes might have more autonomy in their decision-making capabilities. In the past control used to be in machine hardware. Alan Turing instigated a transfer which was essentially embodied in arranging the migration of control from hardware to software where there was to be a master programme and other subprograms related to it.

For example, the Mac as a computer is an event driven machine. However, "regardless of the narrow class of events that personal computers are responsive to, it is in these events that much of the control of the processes now resides"[A]. The particularity of what might be called an interface is what we would like to redefine as 'series of interfaces' with variety of driven events. Current research seem

to concentrate on the interface becoming smarter, more "intelligent", where the power will be embedded in agents, and where we can discuss the allocation of the power of acquisition of these new capabilities. In other words "the debate pits two different traditions of artificial intelligence (AI) against each other: symbolic AI, in which hierarchical components predominate, against behavioural AI, where the meshwork elements are dominant"[B].

This duality of approach resonates in the issues regarding somewhat complex arrangements embedded in our history, consciousness and society and at this point in time call for another, more responsive possibility. In fact it is within the optionality of what one can call series of interfaces that one can create a coherent and rather structured hierarchy of decision making for oneself. This particularity of choice might be relevant in the way that we can approach these aspects of a series of interfaces where we can see what "an open and experimental attitude towards the question of different hybrids and mixtures is what the complexity of reality itself seems to call for" [C].

This redefinition of interface allows for possibilities of the digital being the attractor for the social and the social, at the same time, instigating the digital. The need for series of interfaces stems from the idea that the "space as psychic dimension (abstract space) cannot be separated from space as action (concrete space)" [D] and here the relationship between the digital and the social begins to redefine, asking for other forms of interface. This redefinition bears upon current artificial intelligence and information technology which allows for a series of specialisations and where the role of the virtual, although lying outside the actual, is seen as a virtual force.

Social Technology

"The endless space of daily life is completely enclosed. Every now and then, it suddenly opens to the sky or the ground beneath. Lenses mounted in windows offer magnified views of the traffic, the stars, and adjacent neighbourhoods, but it is the 'artificial landscape' of the interior that dominates the attention, and changes like the weather." [E].

The interior atmosphere, the 'artificial landscape' could be seen in parallel with the image and the space where the image might attract the social in space (Fig1). In this sense the visual, the aural and the sensual domain becomes relevant in the experience of that space. In fact it is not only embodied in the physicality of our presence within certain spaces but equally, like in the case of the visual, in the holding of the centre where "a topological image centre makes the virtual literally appear, analogically, in felt thought"[F] where we can talk about sensation. "Sensation is the analog processing by the body of impinging forces" Massumi p.307. This sensation, the creation of atmosphere and relationship of body to technology, is somewhat at the core of our series of interfaces and what could be seen as social technology.

The interface itself becomes more of a connection in our mind. However, we see it as a division at the same time. A division in conceptual terms, where technological aspects transfer our experience or our body/technology relationship into something that has a consequence, instigation, an elaborate situation within which we presume the topological relationships within socially redefined spaces. This of course is related to fundamental changes that the technology can provide for our senses. Where we can say that the interface at which this might happen is where electricity becomes pain, or lightwaves become vision, or vision becomes imagination.[G]

Social technology or technology which provides for possibility of social aspects is what is at the heart of discussions on creative use of agents. In other words, several computer models might suggest that two different ideas might be seen as analogous and that "being matched would depend on the context of thought" [H] where the process of making interesting transformations of conceptual space in unpredictable ways could be linked, for example, to the image. In this case the results that may be achieved and provide a graphic that a graphic designer never thought of

before, presuming that these images could not "explore or refine space in a systematic way" [I]. In other words, the selection of decisions embedded in this particular process is what may be missing from a cognitive computer approach methodology. "More than anything, however, we, the consumers, want virtual worlds that we can step into, and such worlds will have to be just as complex as, but more compact and intense than, the ones we want to catapult ourselves out of. For this reason, these worlds must not only be montage of attractions (Sergei Eisenstain) compressing and accelerating time, but must also be able to react to us. However to realise this, we, the observers, must become the observed" [J].

The difference at present is that "during the era of the real and representation, people tried to reach

Figure 5 (right).

Figure 6 (far right).
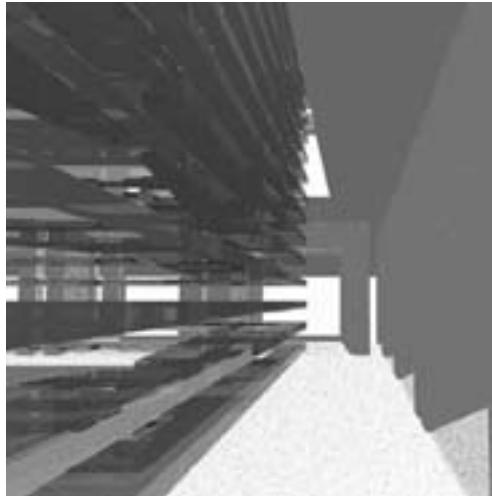
the realm of signs, of illusion, and the imaginary in order to escape the experience of reality, the reverse is pursued in digital spaces: what we are now searching for is the gap in the web of the communicative tubes, through which the real can enter as an event, no matter how terrible or trite this may be" [K]. This new reality bears upon the redefinition of habitable spaces. The spaces start to be redefined in terms elasticity. This elasticity itself is possible within the domain of social technology, the one of touch, sight and sound which at the same time provides more options for variety of occupation (Figs 2 & 3).

Virtual Force – Spatial Elasticity

The idea of elasticity of space is very much embedded in this innovation in the field of artificial intelligence and information technology which allows for a series of specialisations and where the role of the virtual, while, lying outside the actual, is seen as a "force, not a space" [L] . The spatial strategies allow for interface to determine aspects of social space and where the use of space becomes event-driven possibility. This social technology digital space aims to address the virtual as the force for the actual, and, respectively,

its corresponding social space.

For example, colour and its corresponding power is something that could be part of identification within elastic spaces. Space as such is developing within an area of categories that propose somewhat higher level of possibilities than one would expect. The elasticity is embedded in creating community groups within the space where every aspect of that space could be elasticated into another space. In other words, by allocating the space for habitation, the same space can have an option of identifying that space outside the realm of any other space by choice of colour (Figs 4 & 5). Also the level of humidity, airflow, transparency would be able to change relative to its occupation. The elements of the interface could be within the fins of the space, sides, edges and fronts. The spaces would react to the number of people as well as levels of information that they could get out of the number and type of bodies within them. (Fig 6)

The virtual would be in domain of the real and on the boundary of these various interfaces. The number of bodies as well as their weight and height, body position would determine certain agents to react or provide aspects towards the inhabitation of that space.

More to the point is that "the local structure of an

agent's involvments with the world brings to those involvments a pervasive indexicality: the agent is involved with this place, faces this direction, and interacts now with these artefacts"[M]. In this sense the agents need to learn how to make mistakes and then again the architect might understand, anticipate and wish to learn how to propose to orient these agents within the possibility of this occupied space. It seems that the possibilities of these questions do not lie in the image itself, or the visual answer, but rather in the form that these spaces might be able to provide.

The question at the moment remains un-answered yet still continuing.

References

Manuel De Landa in "Virtual Dimension", ed. Beckmann, J., Princeton Architectural Press, NewYork, 1998

P.E.Agre , "Computational Research on Interaction and Agency", 1998

Notes

[A] From 'Meshworks, Hierarchies, and Interfaces', Manuel De Landa in "Virtual Dimension", ed. Beckmann, J., Princeton Architectural Press, NewYork, 1998, p. 278

[B] Ibid., p.282

[C] Ibid., p. 285

[D] Constant, "New Babylon", requoted from Wigley, M., from "Constant's New Babylon, The Hyper-Architecture of Desire", 010 publishers, Rotterdam, 1998.

[E] Constant, "New Babylon", requoted from Wigley, M., from "Constant's New Babylon, The Hyper-Architecture of Desire", 010 publishers, Rotterdam, 1998, p.13

[F] In 'Like parable for the virtual (on the superiority of the analog)' Brian Massumi, in "The Virtual Dimension", ed. Beckman, J., Princeton Architectural Press, NewYork, 1998, p. 307

[G] This concept of division is what we see as transfer of the analog process where there is a "continuous transformation of an impulse from one qualitatively different medium into another" Ibid., p.307

[H] From "Agents and Creativity", by M.A. Boden in Cognitive Technology In Search of a humane interface, ed. B.Gorayska, J.L. Mey, Elsevier, Nortyh Holland, Amsterdam Netherlands, 1996, p.120

[I] Ibid. p.125

[J] From Virtual Worlds:Fascinations and Reactions, by Florian Rotzer, in "Critical Issues in Electronic Media", ed. By Simon Penny, State Univ. of NewYork Press, NewYork, 1995, p.120

[1] Ibid., p.123

[K] Ibid., p.123

[L] John Beckman talks about virtual force in "Merge Invisible Layers" in "The Virtual Dimension", ed. Beckman, J., Princeton Architectural Press, NewYork, 1998 and Mark Goulthorpe in "The active Inert: Notes on Technic Praxis", AA Files 37, 1998 suggests, using Derrida's philosophical point, that to understand the form of finding the force is to lose meaning by finding it. Both views suggest the shift, the event, and the anticipation in design strategy emphasized by the process itself.

[M] From "Computational Research on Interaction and Agency", by P.E.Agre, p.12

Acknowledgements

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