

TURNING THE MACHINE INSIDE OUT

CREATING WORLDS AS INTERFACE

It is always a good thing for artists who work with technology and technological media to study the inner life of machines. Break open the box and look what is inside. This helps to foreclose an overly naive relationship to the medium. Obviously, it also seems a good thing for artists to simply know their material, understand their medium. This is hardly any different today for media artists than it was, for instance, for fresco painters in the grand hall of Sienna's Palazzo Pubblico in the thirteenth century. Still there might be more at stake in the case of digital machines, something that moves beyond the usual questions about the artist's material.

That something might be the creation of Worlds as Interface. This speculative idea was suggested in the proposal for a new physics by the physicist Otto E. RöSSLer. An approach he named *Endophysics*. The main problem for RöSSLer was the apparently insolvable question of how to define an explicit model of the world in its entirety, in which the implicit role of the observer was accounted for, given that the observer is always inextricably implicated in what can be observed of the world in the first place. It would require an explicit model that includes the observer. Such a model would, however, only be possible to construct from an 'exophysical' location, a position outside of the world (in its entirety), which is by definition impossible.

The world according to RöSSLer is defined by that what transfers between the observer and the 'real' world at the interface. It is the interface to the world that defines what can be observed about the 'real' world. This interface constitutes a 'cut' across the 'real' which remains in itself inaccessible, as it is the very implication of the observer in the observed. The riddle of the necessary but impossible inclusion of the observer and the interface in the picture of the world would appear as a problem without solution. But RöSSLer suggest there might just be a little escape hatch from this unresolvable implication. He describes it as the construction of model worlds that include the model observer and their interface with that model world, which allows us, by deferral, from our meta position outside the model world, to study explicitly the implication of the observer into the microscopic phenomena that transpire in the model world, and their influence on macroscopic phenomena in that model world.

Through this deferral it is possible to make explicit the relationships between the observer, the interface, and the 'real' world. While the true nature of the 'real' world remains as such unknowable, since all knowledge is a product of an interface whose structure and effect cannot be determined as there is no external position to the 'real' world from where this could be judged, this deferred study suggests next steps to bring the analysis closer to our own world. First of all Endophysics recognises the necessity to include the study of the human brain, the biological material substructure that structures the interface to the 'real' world. It attempts to bridge the gap between physics, neurophysiology and the subjective, the object of psychological study and psycho-analysis. Endophysics understands the world as something specific to each observer, defined and constituted by the specific structure of the observers' brain and experience, but still attempts through this deferred study and return to the original observer to come closer to an explicit understanding of the interface that defines the world this observer inhabits and escape 'mere subjectivism,' even if the interface itself remains ultimately inaccessible for external scrutiny.

It cannot be a coincidence that Rössler chooses his terminology of the interface as a 'cut' across the 'real' that we know so well from Lacanian psycho-analytical theory. In a Lacanian understanding it is the symbolic order that 'cuts' across the 'real,' which is always in its place but is itself unknowable. The symbolic order, language par excellence, but also the wider objects of semiotic study, open the real as in a cut, without a sense of where or how this cut is applied. The subject is thus stumbling in the dark of that what cannot be known - the 'real' itself.

What the interface creates, both in Rössler's conception as well as in Lacan's, is not an access to the world, but *the world itself*. As such we can never study the world in its entirety as it is structured by the interface that exists prior to this world, but escapes its own detection by the observer - us as human subjects - being nothing more than the effect of an unknown interface that links us to an equally unknown 'real.' We continue to stumble in the dark, playing around with the effects of the interface and delimited by its structural limitations, the structuring principles of which are unknown to us. When we try to observe them at their microscopic (fundamental) level, they change as a result of our action. When we want to see place we cannot see time, when we want to see moment we cannot see space. The state of the fundamental building blocks of 'reality' is unknown to us until we look inside Schrödinger's box, but when we look inside we

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produce the reality we observe. Outside the box the state of that reality remains undecidable, it can be one or zero, we just cannot know. Rössler also refers to Kurt Gödel's undecidability theorem that shows the limits of formal (explicit) reasoning in a thus far undisputed mathematical exposé.

What to do then, if we cannot *extricate* ourselves from the world to study the interface that produces our world as an 'effect'? Should we give up trying to understand that world, our world, our relationship to that world, as we are entangled in a senseless circulatory motion that will never get us closer to the 'real,' closer to understanding, to 'enlightenment'? Or is this all just a formal game, a puzzle, a fancy at best? Surely there are still 'real' passions, joys, pains, beauty and sublime suffering to engage with?

Rössler suggests one possible trajectory: the construction of model worlds. He sees them embodied in our times in virtual worlds, in simulations that can run on digital brains, in finite schemes of explicit description.

Well... perhaps. But over the years (as a personal note on this) I have become increasingly disaffected with the sterile aesthetics and anaemic experience of virtual worlds. They simply do not capture my soul, or haunt my dreams. They do not stir my passions, as the dramatic foreshortenings in a grand Caravaggio painting do. So I am wondering, can there be another way in which we can build a deferred reality that includes the observer and the implicit interface, suitable for explicit study?

Such an undertaking would not simply be the construction of formal model worlds in finite schemes of explicit description, but rather a more visceral experimental practice. Its object would have to be the construction and simultaneous deconstruction of the interface; the conscious explication of an interface with the aim to study the interfaces that implicitly structure our world - not just our experience of the world, but notably *the world itself*.

The reason why I am going into all this is that some of these thoughts were triggered by one work in particular I had the privilege of seeing 'under construction' (always the most exciting phase of a technologically invested art work), in preparation for the Piet Zwart Institute's Media Design M.A. graduation show of 2008. An installation work by Danja Vassiliev. The monstrous machine he created felt like a psychoanalytically

ambiguous tunnel that allowed a view into the very belly of the beast, as if we are looking at the inner life of the machines themselves. It looked a bit like the wonderfully kitschy culmination scene of the Matrix trilogy, where the story's protagonist Neo visits the heart of the machine empire to negotiate a truce between men and machines.

Vassiliev constructed a patently absurd machine, called *m/e/m/e/2.0*,^[1] and finds himself (inadvertently or not) in the best company of a long tradition of 'avant-garde' artists who created various sorts of absurd, ironic, impossible, sadistic, insane or ridiculous machines. His likes are the creators of ominous bachelor machines (Duchamp, Lautréamont, Picabia, Roussel, Kafka), self-destructing machines of the Tinguely type, right down to the magically autistic robotic anti-sculptures of Alan Rath.

In his comments, Vassiliev revealed his own skepticism concerning the current infatuation with disembodied information, especially the World Wide Web with its inapt page metaphors suggesting a stability where only flux and impermanence are the rule. To counter the loss of materiality in the info interface, Vassiliev constructed an elaborate machine that allows us to look, through the tunnel in the installation an via a web cam on the web (yes the object of criticism is part of the work) at a stunningly analogue 'interface.' The information is printed or drawn on half-transparent sheets of circuit board material and becomes visible by a light that shines through the sheet from behind, like an electrical viewing box. To make the whole thing 'interactive,' Vassiliev constructed a tunnel of surgically removed and reinserted CD/DVD computer drives, mounted at an angle of 45 degrees relative to each other, and hollowed out their sliders. The sheets are now covering the slide and the drive places a different sheet in front of the light – at the click of a mouse!

"My main problem was to get the camera to focus automatically," said Vassiliev, as the slides of the drives necessarily had to be placed at different distances from both the source of light as well as the relative position of the observer/camera. So here some complex algorithmic manipulation had to be put in place to give us a readable 'in-focus' web cam image on the website – what would the point of the whole web interface otherwise be if the image be systematically out of focus...?!

The interesting point of Vassiliev's machine is that we can witness it in two forms at once, as a physical interface to a limited universe, five or eight half translucent sheets (depending on the number of drives mounted in the

machine) containing some printed information, or maybe one or two hand-drawn images, whatever might be stored on those few lowly sheets, illuminated by the artists' light from behind. Captured for us lower mortals by a cheap mass-consumption web cam and made visible again in an indirect exposure emanating from the computer screen in the form of a web page containing the web cam feed.

We need this double perspective to understand the nature of the interface, as a principle. We can witness it simultaneously from within the model world constructed by the artist (the feed on the web page), and from the outside as a materialised structure (in the installation). Obviously here the 'content' is not the point of the work. Neither is the medium the thing under scrutiny. Much more it is the interface: The way in which our relationship to whatever it is that is mediated is structured by this interface. By extension we can understand our relationship to the 'real' world as a question of interface and mediation through this deferred but still visceral model world.

One word of caution, though: The analogy of the biological brain to the electronic machine should not be taken too literally. We have witnessed over many century's of scientific and engineering discourse a recurrent recourse to mechanistic models of the mind. Most recently within Hard A.I. research. According to this latter doctrine, a symbol-processing machine such as an electronic digital computer, should, if it is able to perform 'typically' human tasks (of symbolic processing) offer us a possibility, by analogy, to understand the mechanisms of the human mind and the workings of the human brain as a biological symbol processor. However, leaving the obvious contestations of scale and complexity aside (the complexity of the human brain outranks that of current computers by an enormous magnitude), these models offer very little insight, quite likely none whatsoever, into the workings of the human mind and brain. For the simple reason that human minds do not only process symbols, but also many other sensations. The brain itself is not independent of the rest of the body, most notably the nervous system. The biological brain is not silicon-based, and therefore essentially (physically, quantum-mechanically) different from electronic digital machines. And finally, humans are part of living cultures that transform with and through them, while the electronic digital machines are little more than a mere product of the same, without any significant immanent transcendent potential.^[2]

So the central issue in these experimental practices is not to create a literal analogy to the biological brain as such, but much rather to explore the question of the interface in a visceral manner. In fact virtually all works represented in the Media Design graduation show exemplify and embody this central point. They investigate, externalise, and manifest the interface to the domain of information, which lies at the heart of the digital machine.

In his web annotation project, Michael van Schaik investigates simultaneously the (so far) never-delivered promise of the web as a read-write "docuverse," rather than something controlled by web site administrators, and the emerging practice of social tagging, linking and commenting. Van Schaik's project is the most purely informational of the group, but through its emphasis on extra-medial structuring and social praxis it clearly explores the interface as problem and suggests alternative approaches to the information interface.

Maria Karagianni's project "Notations under Provisions" creates a linkage between the informational and embodied realm by creating a system in which Laban dance notations can be interactively performed with the help of a digital machine. But the linkage then exceeds the relationship of notation and performance by capturing this instant performance and putting it under copyright, utilising legal provisions that enable the copyrighting of a first-time performance of a dance score. The interface between the informational and embodied realm is thus extended into the social, institutional and legal realm. Copyright itself, of course, is a purely informational construct, and deeply contested one for that matter. The interesting transformation is the movement from the informational (a digital rendition of Laban notation) through the corporeal (the performance) back to the informational domain (the legal regime). Here again we can be both inside and outside the system to witness how the interface between these domains produces new realities as an 'effect.'

In Gordan Savicic's project "PlaySureVeillance," similarly the interface between a physical game console, a game, and a hidden profiling system creates a play of entertainment and security politics. Players of "Terror Toad," a hacked game for the portable Nintendo DS console, are recorded, profiled and automatically presented and tracked on Facebook. In the course of the game, more and more information is gathered of the participant and stored in a public record. The sinister politics of social coercion in the revered social web are revealed as a problem of unwarranted interfacing.

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During my studio visit Ricardo Lafuente showed me a version of his algorithmic typography generator, where the typeface could be dynamically generated using a MIDI controller to influence parameters of the system. While the final version should be implemented in a web interface, this haptic interface seemed all the more prescient to the interrogation of the interface problem, so it seemed to me.

Linda Hilfling's "Remote Control / Democracy Player" fits in a series of projects that have attempted to deregulate the tight editorial control of mass-media channels - the ultimate tool for social normalisation. Here she proposes a series of participatory tools to influence the content and programming of a local Copenhagen TV station, subverting the logic of tight top-down control of the mass-brainwash-medium TV - it should include the on/off switch, which might have a devastatingly stroboscopic effect on the TV transmission...

Salvador d'Souza's "Traditional Ritual Information System" (TRIS)^[1] explores the abyss of post-colonial transcultural misunderstanding, investigating how to build web-based tools to support the study of symbolic and visual anthropology. In this case d'Souza is looking at the representation of Ghanaian Chieftaincy rituals and their relationship to world cultures. While these rituals are regularly and often erroneously framed as exotic and authentic (in the sense of untainted by external cultures), d'Souza reflects on the complex interrelations between colonial history, migration and translocal linkages, as for instance in the Libation Pouring ritual, which as a local Ghanaian phenomenon is entirely dependent on De Kuyper's schnapps from Schiedam, another local but distinctively not Ghanaian product. The question is how the essential translocal and borderless nature of the World Wide Web relates to such local/translocal practices and linkages.

That in virtually all these projects the information interface and the inner life of the machine are at the heart of the works produced here is certainly no coincidence. Under the leadership of the Media Design M.A., first by Matthew Fuller and now Florian Cramer, there has been a deliberate attempt to question the structure of the machine and the construction of the interface from its inception. Both Fuller and Cramer understand this necessity to dive into the machine, to turn its bowels inside out, to make explicit the implicit interface, to deconstruct and reconstruct it in visceral examinations. Some of the projects presented this

