

## MOISTMEDIA, TECHNOETICS AND THE THREE VRs

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### **Abstract**

*The dry world of computational virtuality and the wet world of biological systems are converging to produce a new substrate for creative work, moistmedia, consisting of bits, atoms, neurons, and genes. There is also a convergence of three VRs*

- *Virtual Reality (interactive digital technology): elematic, immersive.*
- *Validated Reality (reactive mechanical technology): prosaic, Newtonian.*
- *Vegetal Reality (psychoactive plant technology): entheogenic, spiritual.*

*At this interspace lies the great challenge to both science and art: the nature of consciousness. A technoetic aesthetic is needed which, in consort with moistmedia, may enable us as artists to address the key questions of our time:*

- *what is it to be human in the post-biological culture?*
- *what is the ontology of mind and body distributed in cyberspace?*
- *how to deal with the responsibility of redefining nature and even life itself ?*
- *what aspects of the immaterial can contribute the re-materialisation of art?*

Whilst the world at large is only just coming to terms with the Net and the computerisation of society, another media shift is occurring, whose consequences are likely to be even greater. The silicon dry digital domain of computers is converging with the wet biological world of living systems. The *moist* media emerging from this convergence will be the substrate of the art of this century, as telematics, biotechnology and nano-engineering together enter the working process of artists, designers, performers and architects. Just as globalisation means that not only are we all connected, but that our ideas, institutions, even our own identities are constantly in flux, so too will *moistmedia* bridge the artificial and natural domains, transforming the relationship between consciousness and the material world. We move fast not only across the face of the earth but across the reach of our minds. Our cyberception zooms in on the smallest atomic detail of matter and pans out to scan the whole universe. Our double consciousness allows us to perceive simultaneously the inward dynamic of things and their outward show. This Zen of cyberception is the consequence of a technoetic aesthetic in which consciousness in all its forms, at all levels, and in all things, is both the subject and object of art. Just as in the past, evolution of mind has always involved the evolution of the body; distributed mind will seek a distributed body. To assist in the embodiment of this connectivity of mind is part of the artist's task, to navigate the fields of consciousness that new material systems will generate, is part of art's prospectus.

What precisely is moistmedia and what is its potential for art? Does this mean placing the horizon of art beyond our sight lines? We may understand these questions best if we see the cultural shift, which they imply, as providing a kind of wormhole into another universe. I think the metaphor is appropriate to the immense cultural changes that I foresee. Let me extend the metaphor by likening the creation of this new universe to the Big Bang at the origin of the universe in which we have been created. The Big B.A.N.G. of this emergent, new media universe is so-named to reflect the combination of **Bits Atoms Neurons and Genes** which together, in all sorts of relationships, will provide the substrate - the moistmedia - upon which our art and architecture, and indeed our tools and products, will be based.

This Big Bang implies a transition to a much more complex level of human identity, forcing us to look deeply at what it is to live at the edge of the net, half in cyberspace and half in a world which increasingly will be nano-engineered from the bottom up. In this universe the old concept of nature is seen as a set of metaphors which have outlived their usefulness; a

representation of reality, whether poetic or prosaic, which has lost its appeal to our sensibility. Similarly, Dolly the lamb and Alba the rabbit will inform the nursery tales of the new generation, rather than Toad, Mole or Peter Rabbit. Nature is no longer something 'over there' which is to be viewed in the middle distance with a kind of passive objectivity, or abused as an aggressive alien, or treated with dreamy sentimentality. In as much as we are a part of nature, we wish now to be consciously involved in its co-evolution, which is to say in our own self definition and reconstruction. In this sense, technology, often depicted as the enemy of nature, will bring us closer to it, but it will be a nature entirely re-described, and re-aligned to our post-biological sensibilities. This is the territory of the artist; the domain in which reality is to be constructed rather than simply reflected or represented.

The legacy of behavioural, performative, conceptual, and process-based art of the last fifty years has led us to the present condition of artistic action and potential. Amongst the many technological, ethical and aesthetic challenges which we must address, there is the overarching requirement to balance the possibilities for life in the Net with the new forms and relationships afforded by our genetic, molecular and nano-technological engineering.

We are looking at a culture in which intelligence is spilling out of our brains to fill every nook and cranny of the world, every environment, every tool, every product. Pervasive and ubiquitous, the flood of intelligence both human and artificial is unstoppable. At the same time we are coming to recognise that the whole of the natural world is in some sense conscious. The sentience of Gaia is not in doubt. In seeking to create artificial life and artificial intelligence, we have come in turn to understand how consciousness pervades every part of the planet. Moreover, the richness of its bio-diversity need not be threatened by technology, when that technology serves artistic creativity. Instead, it should be seen as a challenge to the cyber-diversity that we might generate as artists in the interspace between virtual and material worlds. This *natrifical* space, product of the merging of the natural and artificial process, is the domain of moistmedia.

But just as we are using new technology to investigate matter and its relationship to mind, so I believe we shall increasingly use an old technology to navigate consciousness and transcendence of the material state. This ancient technology, has been used by shamans for millennia, is the technology of plants, specifically psychoactive plants. I believe that as it becomes more widely understood and experienced, this plant technology will join with computer technology to effect radically our way of being. Together, these two technologies may produce ontology of remarkable dimensions. It will be the point at which engineering becomes ontology. In order to advance an understanding of this hybrid technology, I need to bring a third element to the binary opposition, or parallel positioning, of the virtual and actual in our culture. I am going to call this the triangulation of Three VRs: Virtual Reality, Vegetal Reality and Validated Reality. Now, what do I mean by these three terms?

By Virtual Reality I am referring to much more than a singular technology. Apart from Augmented Reality technology which allows the viewer to see simultaneously both the internal dynamics and the external features of an object of study, VR encompasses a whole ontology of telepresence, of sensory immersion, and immaterial connectivity, which affords the construction of new worlds completely liberated from the constraints of mundane physics. While at first unfamiliar and exotic, 3Dcyberspace is now a common feature of Western culture, and leads to expectations in daily life of completely new forms of entertainment, education, commerce, social gathering, and eventually no doubt, political organisation and democratic representation. Whatever is or will become the case, VR changes the way we view ourselves, the manner of our comportation, and environments we wish to inhabit.

Validated Reality, our daily experience, is familiar to us all. It is what William Blake described as Single Vision, The Dream of Reason and Newton's sleep. It is the orthodox universe of causal "common sense", a reality whose consensus is achieved early in our lives by the constant repetition of its axioms. Validated Reality finds it hard to accept the world views of quantum physics, eastern mysticism, or the many conflicting models of consciousness generated by contemporary scientists, across a wide range of disciplines, in their attempts to bridge the explanatory gap that prevents our understanding of this ultimate mystery. Those whose minds have been conditioned to accept Validated Reality as the only reality balk at the implications of nano-technology, and have great difficulty in coming to terms with genetic modelling and the scope of biotechnics in redefining Nature. In short, Validated Reality is authorised reality, whose narrow confines delimit the sense of what we are or what we could be. Nevertheless it controls the co-ordinates of our daily life, dictates the protocols of our behaviour, and provides an illusion of coherence in a contingent universe. It has been Validated Reality, which has created Nature as an array of objects set in Euclidean space, rather than a dynamic network of processes and relationships. You need it to catch a bus, but you leave it behind to create teleportation.

Vegetal Reality, the third axis of reality following the Big Bang, is quite unfamiliar to Western praxis, despite the extensive researches of Richard Evans Schultes of Harvard, for example, or the proselytising of the late Terence McKenna. Vegetal Reality can be understood in the context of technoetics, as the transformation of consciousness by technology. In this case, the plant technology involved supports a canon of practice and insight which is archaic in its human application, known to us principally through the work of shamans, largely visionary and often operating in a context of healing which is distant in the extreme from the Validated Reality of western medicine.

It will be through Vegetal Reality, conferred particularly by such plants as the ayahuasca, in consort with telematic systems, that we shall navigate, and perhaps transform, the field of consciousness of which we are a part. Ayahuasca is a Quechuan word referring to the vine *Banisteriopsis caapi*, which consists of the beta-carboline alkaloids harmine, harmoline, and tetrahydroharmine. Combined with plants such as *psychotria viridis*, which contains tryptamine, it is brewed as a tea, which properly consumed brings about visionary states of awareness. The process is described as entheogenic, which means searching for the God within. The god is that repository of knowledge and energy, often described as pure light, which links us on the psychic or spiritual plane to the other worlds and other planes of existence from which are separated by our ordinary state of awareness. It parallels our technological probing for knowledge deep into matter, and our voyages into outer space. I am convinced that the technology of psychoactive plants, aligned with the technology of interactive media, will come to constitute a cyberbotany which will largely be articulated and defined by moistmedia. Entheogenics will guide much of the future development of moistmedia art. Encounters with that which is unknown within us, linking to our design of the new and unknown beyond us, will give interactive art its primary role. Cyberbotany will cover a wide spectrum of activity and investigation into artificial life forms within the cyber and nano ecologies, on one hand, and into the technoetic dimensions of consciousness and cognition on the other.

To stand at the confluence of these three VRs (the Three Graces of our culture) is to take a more participative and formative place in the stream of evolution. We are all familiar with the dialectic between the actual and the virtual, or the real and the artificial as we persist in calling it, even though any real differentiation between these states is fast disappearing. We address nature in terms of artifice and treat the artificial quite naturally. The interplay of natural and artificial systems is becoming quite seamless, just as our mental and physical prosthesis are integral to our being. We are familiar with the notion of interspace, the place at the edge of the net where these two realities come together. We know that it constitutes

a domain, which presents enormous problems and wonderful opportunities, for example to architects and urban planners. We know too the questions of identity which are raised when we find that we can be distributed across the Net. Now, with cyberbotany, we have to bring to these issues the technology of mind, which will induce new, technoetic states of consciousness. This leads us to consider a scenario of being which is non-ordinary, non-local, and non-linear, thereby fusing the three principle features of 21st century culture: consciousness, quantum physics, and interactive/psychoactive media.

Telematic space makes actors of us all. There can be no outside observer. You are either in the space and actively engaged or you are no where at all. The consequence of the Net, even at the popular level, in fact especially at the popular level, is to encourage us to redefine ourselves, to re-invent ourselves, to create multiple identities operating at many locations, distributed throughout cyberspace. There we can play with gender, physical characteristics, and a multiplicity of roles. Similarly, 3D worlds enable us constantly to design the environment in which we can engage through our avatars and agents with others in the game of self-invention. The game is in the full seriousness of understanding how to manage reality, the many realities that cyberspace allows us to create. But our behaviour in cyberspace is both real and a phase transition, a preparation for life in the world of moistmedia. What we once called 'virtual' has now become actual for us, and what was thought to be a immutably 'actual' is treated by us as transient and virtual. The artificial is now part of our nature, and nature is in large part artificial.

Just as the scanning tunnelling microscope (STM) lets us view individual atoms and also move them around at the same time, so too our brains will focus both on material events and trigger their transformation at the same time. In this context, to envisage is to create. The interface is moving into the brain; we see how electronic sensors can utilise biological elements, and semiconductor devices use living micro-organisms. We are approaching that point in our evolution where artificial neural networks will join with our own biological neural networks into a seamless cognitive whole: this will mean a marriage of the immaterial and the material leading to transcendence over the simple materiality of 'natural', unmediated life. Self aware systems invested in self-replicating, self-defining structures will raise questions about the nature and purpose of art, just as artificial life technology, complexity and algorithmic process have already raised questions about authorship. It will be the role of research centres and media art centres to bring these issues, through the vision of artists invested in moistmedia, to the public arena.

Artists working with technology are already bringing matters of mind and consciousness to the top of their agenda. And in the sciences the pursuit of knowledge in the attempt to understand consciousness is intense. For example, in Tucson Arizona, every two years, nearly a thousand leading scientists, technologists and philosophers from all over the world assemble to present their research and discuss the issues raised in the attempt to build a science of consciousness. At my research centre CAiiA-STAR we convene the conference Consciousness Reframed every year, which has over one hundred presentations by artists and scientists from over 25 countries. The issues in every case are: how does technology affect consciousness, how does our understanding of the mind influence the technological and artistic goals we set ourselves. But the "explanatory gap" between mind and matter remains. While scientists seek to analyse, dissect and explain consciousness, artists attempt to navigate consciousness and create new structures, images and experiences within it. Consciousness is a field where art and science can co-mingle, where together we face what is perhaps the final frontier of knowledge - consciousness, the ultimate mysterium. It is also of course precisely what shamanic culture has been immersed in for millennia

Though the shift from a predominantly immaterial, screen-based culture to the re-materialisation of art in moistmedia and nanotechnological construction will be radical,

the canon of interactive art is not changed intrinsically. Even though art practice will move from pixels to molecules, from fly-through itineraries to bottom-up design, the five-fold path of *Connectivity, Immersion, Interaction, Transformation, Emergence* will not change. Our media may now become moist, our environment will reflect the fall-out of the Big B.A.N.G., but the artistic process will continue to follow the pathway that leads from connectivity (between minds and systems) to immersion in the data/nano-fields. We shall still plan interactive scenarios that lead to the transformation of matter and mind, and the reframing of consciousness. We shall continue to plant artistic seeds that can lead to the emergence of images, structures, and relationships that provide us with new insights, experiences and meaning.

In the moistmedia environment, the artist will continue to be concerned to create the context within which meaning and experience can be generated by the interactivity of the viewer. Work with pixels and telematic networks will interact with work with molecules and biological structures. Process will still be valued over product. Reception (from the artist to the viewer) will continue to give way to Negotiation (between artist and viewer) in the theory of communication. We shall continue to celebrate the contingency of the world over and above the killing cosiness of unfounded certainties. Working with moistmedia will reinforce our understanding that reality is to be actively constructed rather than passively observed. The classical model of the Autonomous Brain gives way to that of the Distributed Mind. Telenoia will remain as the defining emotion of our time, just as paranoia so succinctly describes the dominant attitude of industrial life in the twentieth century. Finally, in reviewing the continuity of the aesthetic in art from the digital to moistmedia, we shall continue to be concerned with forms of behaviour rather than with the behaviour of forms. The historic shift from the culture of the objet d'art and the composition of meaning to that invested in process, performance and the emergence of meaning will be maintained and enriched in the moist ecology of art. So this radical shift does not mean rupture or loss of those aesthetic assets and insights built up in art over the past fifty years; instead it means a development which can be enriched by recognising its links back into the practices and purposes of quite ancient cultures, indeed to aesthetic and spiritual values found in early societies throughout the world.

Research into these values and the societies which still uphold them, means immersing oneself in their practices. For my part, I have spent time over the past six years, in various parts of Brazil in search of that kind of experience and for an understanding that will allow me to make a connection between the non-ordinary states of consciousness of early cultures and states of consciousness that new technologies might engender. I have pursued this research on the basis that it might provide useful insights into the ways we might proceed with computer applications designed to extend, transform or emulate the human mind. Three years ago, I flew into the remote Xingu River region of the Matto Grosso, where I stayed with a group of Indians known as the Kuikuru. While their shamans (or pajés) played different roles - medical, social, or spiritual - they all had in common the need to navigate psychic space, to communicate with other worlds, both within themselves and out in the external world of plants and animals.

I wanted to share my experience of navigating cyberspace with them, to see if there were any commonalities, anything either of us could learn from the other. I knew nothing then of their most formative technology just as they knew nothing of mine. While mine was invested in the interactivity and connectivity of telematic, computer technology, theirs was invested in the psychoactive and telepathic technology of plants. It was the first intimation of the correspondences and perhaps co-ordinations I was later to theorise between the two VRs, virtual reality technology and vegetal reality technology. I should hasten to add that the prescient pajés of the Kuikuru quickly saw the implications and promises of cyberspace, and on a purely pragmatic level quickly came to the conclusion that the Web could help save their culture, avoiding the contagion of tourists and speculators, by

restricting visitors to a website, to visiting their village in cyberspace, thereby protecting them physically from the transmission of disease and their culture from invasive ideologies. They saw quickly how it could also function as the market place for trading their artefacts and craftwork, making them more independent of FUNAI, and government interference more generally, and removing the need of the bi-monthly airlift to trade in the city.

What I learned from them was particularly significant for interactive art. I believe it is a lesson we could learn also from many other non-westernised or aboriginal groups in Asia, Africa, and Australia. All the activity of the pajés, and of those who interact with them in painting, dancing, chanting, making music, is performative but is not intended as a public performance. It is never played to an audience, actual or implicit. No one is watching or will be expected to watch what is being enacted. It is not a public performance but a spiritual enactment, which entails the structuring or re-structuring of psychic forces. To paint the body elaborately, to stamp the ground repeatedly, to shake the rattle, to beat the drum, to circle round, pace back and forth in unison, is to invoke these forces, to conjure hidden energies. This is an enactment of psychic power not a performance or cultural entertainment. This perspective, although seen at a distance from our current hypermediated culture, may be of value in our consideration of the function of works of interactive art. Art as an enactment of mind implies an intimate level of human interaction within the system, which constitutes the work of art, an art without audience in its inactive mode. Eschewing the passive voyeur, the traditional gallery viewer, this technoetic aesthetic speaks to a kind of widespread intimacy, closeness on the planetary scale. It is the question of intimacy in the relationship between the individual and cyberspace, which must be at the heart of any research into technologically assisted constructions of reality. The quality of intimacy in the relationship between artist, system and viewer is of the greatest importance if a technologically based practice is to engage or transform our field of consciousness.

So much early promise of art at the interface (be it a screen or a prepared environment or intelligent space) has been lost: that direct mind-to-mind experience of subtle intimacy, has been wrecked by an indulgence in spectacle, mere special effects. While the art of special effects is in some ways the glory of our technical achievements, it can be disastrous for the artist, just as hyperbole and inflated rhetoric can be for the writer. Progressively we have seen intimacy and delicacy in technological art being replaced publicly by heavy-handed spectacle. Why? I think in part the museums have been to blame. In their haste to appear contemporary and up to date, they have simply rejigged the partitioning of their endless white cubes, as if all interactive art needs for its proper installation is more wall sockets to plug into, and lower light levels to show up the screens. So the user of these one to one interactive installations simply becomes part of an "interactive" performance that other viewers passing by can observe....as a spectacle. There has been little re-thinking of what the museum might be in the wake of digitalisation and the rise of connectivity and interactivity in the arts. The advent of Vegetal Reality as a constituent technology of interactive art will compound the complexity and increase the need to preserve intimacy in the manipulation and experience of the work. There is a challenge here to all new art centres and museums, for which answers are not readily available, and for which no quick-fix solutions will be suitable. Only careful negotiation between curators and artists, designers and technologists in a truly transdisciplinary research and collaboration, is likely to move in the right direction.

The key to understanding this new state of being is language: the understanding that language is not merely a device for communicating ideas about the world but rather a tool for bringing the world into existence. Art is a form of world building, of mind construction, of self-creation, whether through interactive or psychoactive systems, molecular modelling or nano-engineering. Art is the search for new language embodied in forms and

behaviours, texts and structures. When it is embodied in Moistmedia, it is language involving all the senses, going perhaps beyond the senses, calling both on our newly evolved cyberception and our re-discovered psi-perception. As this language develops we shall see that it can speak to individuals in all kinds of social settings, notwithstanding their political complexion or cultural constraints. These individuals in turn will contribute to the construction of this planetary language through their interactivity with the new scenarios and constructions that new media artists will create. The art of the 21<sup>st</sup> century will constitute a language, which builds the world as it defines the desire of those who articulate it. If 20<sup>th</sup> century art was about self-expression and response to experience, the art of our century will be about self-construction and the creation of experience, with no clear distinction between the maker and the viewer.

Moistmedia is transformative media; moist systems are the agencies of change. Western art has been through what its many theorists and commentators have chosen to see as an extended period of materialism, attaching no significance to the spiritual ambitions of its featured artists, and ignoring the everyday intuitions and psychic sensibilities of those hundreds of thousands of artists who have found no place in the history books. Art in reality has always been a spiritual exercise no matter what gloss prevailing political attitudes or cultural ideologies have forced upon it. The role of technology, virtual, validated and vegetal, is to provide the tools and media – moistmedia – by which these spiritual and cultural ambitions can be realised.