

AVATAR: ecopolitics, technology, science, art and myth

Bert Olivier

Department of Journalism, Media and Philosophy, Nelson Mandela Metropolitan University, Port Elizabeth
Bert.Olivier@nmmu.ac.za

This paper is an ecopolitical interpretation of James Cameron's recent film, *Avatar*. By 'ecopolitical' is meant that the film is not merely ecologically significant – in so far as it stresses the vital interconnectedness of all living beings as well as with their environment – but communicates and promotes a political stance which should galvanize people into the kind of action that is intent on rescuing the planetary ecosystem(s) from continued exploitation and degradation at the hands of an economic (and political) system that is not receptive to the needs of living beings. Heidegger's critique of technology, as well as his understanding of art is enlisted to make sense of the remarkable fusion of advanced cinema technology and creative film-art in *Avatar*, and Joel Kovel's analysis of the phenomenon of life provides a conceptual grid for the interpretation of Cameron's thematization of life on the fictional planet of Pandora (which functions here as metaphor for Earth). It is argued that, through viewer-identification with the protagonists in the film, it engenders a 'transformative' experience on the part of audiences, allowing them to conceive of moving from a state of 'paralysis' (represented in the character of Jake) to one of ecopolitical action. Attention is also given to the countervailing images of technology and science projected by the film, as well as to the question, whether its representation of the relation between science and myth is commensurate with Nietzsche's conception of this relation and with Lyotard's distinction between narrative and scientific knowledge.

Key words: ecopolitical, (film-)art, science, technology, Heidegger, Nietzsche, Kovel, Lyotard

Avatar, ekopolities, tegnologie, wetenskap, kuns, mite

Hierdie artikel is 'n eko-politiese interpretasie van James Cameron se film, *Avatar*. Met 'eko-politiese' word bedoel dat die film nie alleen ekologies relevant is nie – vir sover dit die onmisbare onderlinge verbintenis van alle lewende wesens, asook met hul omgewing, beklemtoon – maar dat dit ook 'n politiese houding kommunikeer en bevorder wat mense tot die soort handeling aanspoor wat daarop gerig is om die aarde se ekosisteme van voortgaande eksploitasie en degradering deur 'n ekonomiese (en politieke) sisteem wat nie ontvanklik is vir die behoeftes van lewende wesens nie, te red. Heidegger se kritiek van tegnologie, sowel as sy begrip van kuns word ingespan om die merkwaardige samesmelting van gevorderde film-tegnologie en kreatiewe filmkuns in *Avatar* te verstaan, en Joel Kovel se analise van die verskynsel van lewe voorsien 'n begripsraamwerk om Cameron se tematisering van lewe op die fiktiewe planeet Pandora (as metafoor vir die aarde) te kan interpreteer. Daar word betoog dat, via gehoor-identifisering met die karakters in die film, 'n 'transformerende' ervaring by kykers teweeggebring word, wat hulle in staat stel om van 'n toestand van 'verlamming' (soos in die karakter van Jake beliggaam) in een van ekopolitiese handeling oor te gaan. Daar word ook aandag geskenk aan die uiteenlopende beelde van tegnologie en wetenskap wat die rolprent projekteer, sowel as aan die vraag, of die verhouding tussen wetenskap en mite wat daardeur voorgestel word, versoenbaar is met Nietzsche se opvatting hiervan, asook met Lyotard se onderskeid tussen narratiewe en wetenskaplike kennis.

Slutelwoorde: ekopolities, (film-)kuns, wetenskap, tegnologie, Heidegger, Nietzsche, Kovel, Lyotard

James Cameron's latest film, *AVATAR* (2009)¹ is, for various reasons which will be addressed in this paper, a highly significant film, at least as important as the first two *Terminator*-films² (and in a related sense, *Titanic*) directed by him. It has been criticized in various quarters as just another maudlin love story, and – by the neoconservative press – as dangerously vindicating insurgents' actions (Monbiot 2010), presumably in Afghanistan, Iraq and Vietnam (among other, at one time or another 'occupied' countries), but although the conservative take on it is symptomatic of a nerve being struck by the film, I believe that its most powerful impact lies in its ecological – specifically ecopolitical – implications.

One should certainly not underestimate the importance of the film's undisguised criticism of historical colonial excesses – who can fail to recognize the theme of violently occupying the land of 'savages' (derogatorily called 'blue monkeys'), with a view to extracting valuable, naturally occurring materials for purposes of profit, as having several historical referents? And whether it was in the Americas or in Africa, such rapacious appropriation of highly prized metals like gold, for instance, usually went hand in hand with the decimation, if not virtual extermination of the local populations. Small wonder that neoconservatives see *Avatar's* turning of the tables on the human occupiers by planet Pandora's native Na'vi as communicating a

traitorous act on the part of Cameron. The guys with the guns should win, after all, no matter how many of the indigenous people may bite the dust in the process, let alone the supposedly expendable *flora* and *fauna*.

What I would like to do here, is to evaluate *Avatar* as ecopolitical film, which requires a theoretical approach (to be elaborated on below), and, in the process, to draw connections between this aspect of the film and its thematization of science, technology and myth within the context of extant society. Nevertheless, it should be stressed that, in the first place, it is an audiovisual work or 'text'. As such, no matter what interpretive meaning(s) can be assigned to it, such meaning would be dead-born if it were not for the sheer power of the image-sequences and image-configurations that comprise the film in syntagmatic and paradigmatic terms – that is, sequentially (narratively) and comparatively (associatively) determined meaning, respectively. Regardless of the advanced technical means involved, these cinematographically produced audiovisual images are therefore the bearers of narrative (syntagmatic) and associative (paradigmatic) meaning that viewers 'decode'³ or interpret in the course of viewing the film.

In the case of *Avatar* some of the image-sequences are unusual in their immediate appearance, given the novel cinematographic means that were employed to generate them – imaginatively configured alien humanoid beings (the Na'vi), as well as flora and fauna, are realistically presented as interacting with humans – but this does not hamper the interpretive process. The reason for this is that the film's diegetic space-time instantiates what Barthes (1975: 14) calls a 'text of pleasure', as opposed to a 'text of bliss'. With the former, readers and viewers are not required to engage in a mind-shift, as it were (as they are in the case of a 'text of bliss'), to be able to familiarize themselves with the space-time continuum of a world that is wholly unlike that of everyday experience. Pandoran 'nature' does, indeed, look different from that on planet earth, with different plant- and animal-species, a blue-skinned humanoid race, flying predators that seem to dwarf terrestrial eagles, and six-legged 'horses' (which Cameron probably borrowed from Edgar Rice Burroughs's 'John Carter on Mars/Barsoom' novel-series), among other living things. But no one has any difficulty recognizing them as (admittedly very different) animals, plants and so on – there is no serious challenge to viewers to adjust, revise and reconceptualize the very organizational parameters of a 'world' in terms of space-time relations, or linguistic, political, or gender-relations (even the Na'vi's political organization seems to resemble what one is accustomed to on earth in 'premodern' tribal communities).

Where such a radical adjustment is called for, one has encountered a 'text of bliss', and while *Avatar* may seem, at first sight, to be just such a 'text of bliss', I would therefore argue that this is not the case, because, all the novel, 'alien' surroundings on planet Pandora notwithstanding, the film-landscape is traversed, time flows, and language functions, in the 'normal' manner, instead of disrupting one's spatiotemporal awareness so drastically that it is difficult to make sense of the film's constitutive images. Consequently, interpreting *Avatar* in political – or more accurately, eco-political – terms does not have to confront the difficult task of translating the meaning of ('eco' and) 'political' from an 'abnormal', 'text of bliss-' context to a 'normal' one. In a truly 'alien' universe the 'political' could, for all we know, be thoroughly intertwined with, and subject to, what we know as 'entertainment' or leisure, or space-time flows could be presented in such a disrupting manner that viewers could not orientate themselves without great difficulty. A novel or film that establishes this connection persuasively, would qualify for being called a 'text of bliss'. In other words, such texts problematize the very meaning of language unbearably. In fact, however, Pandoran space-time may be approached and understood in the same manner as its terrestrial counterpart, regardless of its inventive differences. On the other hand, it may be argued that, precisely at the level of ecological relations (articulated in language), *Avatar* qualifies as a 'text of bliss', given the stark contrast between the Na'vi's understanding

of such relations and that of the humans. The issue is therefore more complex than it seems at first sight.

The fact that the film narrative is set towards the end of the 22nd century on the planet Pandora, no doubt suggests the myriad of evils (mythologically associated with that name) that the humans believe they have to face there. Contrast this with the Na'vi perspective, that everything on the planet is somehow connected, and moreover, that all her life-forms are sacred in a manner the technocratic humans cannot grasp (with the exception of only a few, such as the biologist, Grace), and the stage is set for a showdown between the forces that represent life and those which stand for the exploitation of what is 'useful' (read: 'profitable') to humans, with scant regard for living things.

Judging by his previous films as well as by the science-fiction television series for which he and Charles Eglee were responsible, *Dark Angel* (2000), James Cameron is fascinated by the ambivalence of science and technology – their capacity to open up new worlds, as it were, and simultaneously to destroy the world. This science-fiction theme runs through his two *Terminator* films (1984 & 1991; see Olivier 2002) as well as, implicitly, through *Titanic* (1997), where the eponymous ship graphically represents another, related theme, namely that of human hubris or technocratic arrogance in the face of the limitations that nature (or, if you like, the gods) imposes on people.

From this perspective *Avatar* would appear to be science fiction – science and technology are impressively pervasive in its plot – but it is also more than that. What Martin Heidegger saw in technology, on the one hand, and in art, on the other, come together in this film. Not only is this impressive film art (ostensibly only of the popular variety, until one starts unpacking what Cameron has done here), but without the most advanced cinematographic technology (which includes everything that cinema can draw on today, most notably 3-D and CG-technology), this film art would not be possible. At a second level, too, technology and art merge – in Heidegger's sense of *techné* and *poiesis*, words from which the English words 'technical' and 'technology', on the one hand, and 'poetry', on the other hand, derive.

Both these ancient Greek words denote a kind of knowing, in so far as *poiesis* is, for Heidegger (1977: 27), a 'bringing forth' or setting into the light of something that was concealed before, and *techné* (which pertained to, among other things, what artists and craftspeople did among the ancient Greeks) was linked to this, so that it was inseparable from the pursuit of truth, or what the Greeks called *aletheia* ('unconcealedness').

To this one should add that Heidegger regarded modern technology, which is clearly related (as the word shows) to *techné*, as something which has 'forgotten' its role as a way – just one way among many – of knowing things. Instead, as technology is practised today, it has elevated itself to the position of being the ONLY legitimate way of approaching reality, including nature and humans, in the process reducing them to mere resources. (If anyone doubts this, consider that what used to be called the 'Personnel Department' of companies and universities, has for some time now been called the 'Human Resources Department' instead. Language is indeed revealing here.)

If one considers that the present era is one that is inseparable from the shaping role of technology, then the projection of a technocratic future for humans, in which they extend the rule of technology to other worlds (as it is done fictionally in *Avatar*), is not unimaginable; in fact, it is plausible. It is therefore worthwhile dwelling a little longer on the thought of Martin Heidegger in this regard, despite the fact that Heidegger's conception of technology was shaped by an earlier phase of technological development. As already implied, Heidegger (1977) believed that technology is *the* dominant power of the twentieth century, and I have no doubt

that, in the advanced form of ‘information and communication technology’, or what Hardt and Negri (2001: 280-289) call ‘informatization’, it is still the case today (as long as one remembers its indissoluble link with neoliberal capitalism, which requires advanced technology for product innovation). Moreover, as I shall show in what follows, Heidegger’s notion of technology does not exclude the kind of fusion that one witnesses in *Avatar*, between advanced (film-) technology and art, or an instantiation of what he called *techné* and *poiesis*.

Heidegger’s (1977: 4; 19-20) distinction between technology and its ‘essence’, or what he calls ‘*Gestell*’ (‘Enframing’, ‘Framework’) – which is itself nothing technological, and operates in the ontological register to determine the way in which social reality and nature are organized or revealed – may seem counter-intuitive to most people. It is illuminating, however, to understand Heidegger comparatively: the Western Middle Ages was a ‘theocentric’ age, in so far as all questions and problems (philosophical, social, political, religious, economic) were answered against the pervasive background assumption of humans occupying a privileged position in God’s creation. To be sure, endless debates waged concerning the relation between church and state, humanity and God, faith and reason, but the fundamental assumption of God’s centrality to an understanding of virtually anything and everything on earth was, as far as the evidence suggests, left unquestioned.

In the same manner, if Heidegger is correct, technology, or rather, its ‘essence’ as ‘Enframing’, is a pervasive, inescapable ontological ‘framework’ which functions implicitly and tacitly as unquestioned assumption on the part of individuals whenever problems are approached, or questions are asked, about society, economics, politics, nature, and just about anything which could possibly be a topic of conversation. No societal institution, civil or military, escapes being positioned in this framework of organization and evaluation underpinning humanity’s current manner of experiencing the real.

One may wonder what Heidegger means by saying the essence of technology is ‘Enframing’. According to him, this manifests itself as a (supposedly privileged) mode of being or ‘openness’ where everything is seen as being susceptible to being ‘set upon’ or ‘ordered’, or as something that can be turned into a ‘standing-reserve’, which means that things and energy, including human beings, can be used or ‘stored’ as ‘resources’ for use (Heidegger 1977: 16-18). As pointed out earlier, it is a way of ‘framing’ questions and problems, even religious ones, in the present era, as Melchert so appositely remarks (1991: 576):

In the age of enframing, where everything is understood as standing-reserve, there is no ‘room’ for God. (Or perhaps even God is thought of as ‘standing-reserve’, a kind of public utility that can be used to gain the satisfaction of one’s desires; one often gets this impression from the television evangelists).

With Melchert’s description of the colonization of religion by technology as Enframing in mind, it may come as a surprise that Heidegger (1977: 12-14; 20-25) regards it – Enframing – as a legitimate manner in which the real presents itself. Just as, among the ancient Greeks (1977: 10-11), nature manifested itself as *physis* (a perpetual, cyclical upsurge or coming, and the corresponding decay, or going of living things), today humans experience the real as a ‘standing-reserve’, a monstrous ‘challenging forth’ and unlocking of what was previously ‘let-be’, or recognized in its autonomy, specifically nature.⁴

Is it at all difficult to hear echoes of *Avatar* here? Certainly not, specifically regarding the idea of nature, or *physis*, that animates, and is animated by, the film’s images of forests, trees and other plants, animals ranging from exotic reptiles and predators to antelope. But perhaps most of all, the idea of nature as something close to humanoids/humans is evident in the striking iconic fusion between the humanoid and the feral that Cameron has achieved in the appearance and behaviour of the Na’vi ‘people’, with their tails and their feline hissing – something reminiscent of Nietzsche’s (1954: 44-50) observation, that the ancient Greek chorus of satyrs represents the

Greeks' recognition of the fusion of nature and humanity (they are half-animal, half-human), by implication also in humans.

At the same time, the contrast between the Na'vi's closeness to, or participation in, nature, and the humans' approach to it on Pandora, is easily comprehensible in terms of *physis*, on the one hand, and nature as 'standing-reserve', on the other. The corporation mining Pandora's soil for a 'precious' metal appositely called 'unobtainium', constitutes Pandoran nature as resource, or 'standing-reserve' to be 'set upon', 'ordered' and utilized for generating profit. In the process, everything that stands in the way of the mining operations is ruthlessly removed, if not by some kind of persuasion – through humans' avatars (Na'vi bodies as agents connected to and representing human 'controllers') negotiating with the Na'vi, for example – then by violent military force. The scene-sequence where the colossal 'Home-tree' is destroyed by firing rockets into its gigantic trunk near the base, with numerous collateral Na'vi casualties, is emblematic in this regard.

Here one has to take note of Heidegger's illuminating characterization of Enframing as that which determines modern technology (1977: 20):

Enframing means the gathering together of that setting-upon which sets upon man, i.e., challenges him forth, to reveal the real, in the mode of ordering, as standing-reserve. Enframing means that way of revealing which holds sway in the essence of modern technology and which is itself nothing technological.

Compare the way that Enframing constitutes nature (as something to be 'ordered' for exploitation) with its manifestation as *physis*, or nature as an encompassing ensemble of living beings, continually emerging and being taken back into a kind of cyclical process. Kovel's (2007: 97-98) evocative description of the relation between nature and life resonates with Heidegger's conception of *physis*, and amplifies it in a way that further enhances one's comprehension of the image of Pandoran nature (and by metaphorical implication, nature on Earth):

Nature as such vastly exceeds the phenomena of life; yet life may be justly regarded as being at the same time both a special case of nature, and, in a way we only dimly surmise, as a potential of nature – something that nature generates under specific circumstances. Life is unitary, in the sense that the basic molecular architectures of humans, redwoods and slime molds all indicate a common ancestor. Yet life is also inconceivably – to our dim awareness – multiform, in a profusion that has arisen over 3.5 billion years through ceaseless interactions between living creatures, and with their non-living surroundings.

To be able to understand fully the significance of those scene-sequences in *Avatar* which display and powerfully suggest the interconnectedness of all the living creatures on Pandora, and therefore by implication also on earth, one has to overcome the prejudice, that the Na'vi are a bunch of romanticized savages who presumably have some quasi-mystical connection with nature. Think of the scenes where members of the Na'vi are shown 'connecting' with the horse-like animals they ride, or with the 'banshees' on which they take to the air, by linking their own hair with similar appendages on these animals. They even do it with trees, and when Jake addresses Eywa (the Na'vi god), he establishes a similar connection with the 'tree of souls'. This may seem far-fetched, and perhaps the idea of such a 'direct plug-in' connection is exactly that, but the notion of interconnectedness itself is not beyond belief. In fact, once the notion of 'ecology' is introduced, this is easily perceived as not being far-fetched at all (Kovel 2007: 98):

...we think of nature as the integral of all ecosystems, extending in every direction and beyond the limits of the planet. Talking of integrals means talking in terms of organisms, and of Wholes – in other words, the systematic introduction of an ecological vision commits us to positing reality as an interconnected web whose numberless nodes are integrated into holistic beings of ever-exfoliating wonder...

Once this is understood, it is less difficult to grasp why 'modern' technology, of the kind that Heidegger regards as being inimical to the integrity or being of nature, or of the earth, should be resisted, or perhaps rather be transformed into something different, more benign (a question that will be addressed later in terms of the relation between science and myth in *Avatar*).

Avatar serves well to show what it means that, for Heidegger (1977: 24-35), humans have an indispensable, but ambivalent role to play in the unfolding, expansion and reinforcement of the rule of Enframing. To be sure, Enframing ‘sets’ humanity ‘upon a way’ of challenging things (including itself) into a specific mode of appearance through an ‘ordering’ as ‘standing-reserve’, but although this process is inclined to become hegemonic, it is not the only way of revealing or uncovering the real, nor is it ‘a fate that compels’. Heidegger points out (1977: 25) that *poiesis*, which makes all kinds of art possible, is such a different mode of revealing. Besides, because humans ‘belong to’ the realm of all of these modes in which the real manifests itself, they are capable of ‘listening’, and ‘hearing’ the many-voiced call of being, instead of being ‘simply constrained to obey...’ (1977: 25).

For Heidegger this is what *freedom* means – not just a quality of the human will, but something that belongs to humanity by virtue of its participation in the process of concealing and revealing of the real. And at the present time, when Enframing is the dominant way of manifesting the real, the willingness to think of it as a ‘way’ of such revealing, liberates humans from its tyranny (Heidegger 1977: 25-26).

One should nevertheless not overlook the fact that the time of the Enframing is a time of extreme danger, however. One faces another paradox here (1977: 26-27):

This danger attests itself to us in two ways. As soon as what is unconcealed no longer concerns man even as object [something that, for Heidegger, properly belonged to the age of the primacy of science, instead of technology; B.O.], but does so, rather, exclusively as standing-reserve, and man in the midst of objectlessness is nothing but the orderer of the standing-reserve, then he comes to the very brink of a precipitous fall; that is, he comes to the point where he himself will have to be taken as standing-reserve.

It is precisely here that a crucial mistake is easily made:

Meanwhile man, precisely as the one so threatened, exalts himself to the posture of lord of the earth. In this way the impression comes to prevail that everything man encounters exists only insofar as it is his construct.

The hubristic self-glorification that Heidegger is talking about here is ubiquitous, in so far as people take their constructions and inventions, technical and otherwise, to be the products, *solely*, of their own ingenuity, instead of reflecting on the fundamental prerequisite, namely that such inventiveness first has to manifest itself as a possibility among other possibilities. Most significantly, this tendency hides the concomitant truth, *that there are other possibilities of being*, and in this regard Heidegger (1977: 27) alludes to *poiesis* in particular.

The danger that follows from this is that technology as Enframing not only hides itself as just another mode of manifesting the real (instead of which one merely stares oneself blind against the gadgets and machines which are, mistakenly, regarded as ‘technology’), but especially that it has already prevented human beings from discovering that there is something more fundamental than technology, and than its essence, Enframing (Heidegger 1977: 28). If this were not the case, one would never encounter alternative ways of manifesting being, such as *poiesis* or art. There is hope, however, to which effect Heidegger quotes Hölderlin’s words (1977: 28):

*But where danger is, grows
The saving power also.*

This suggests that Enframing must somehow ‘contain’ within itself the seed of what could ‘save’ humanity from its one-sided, hegemonic rule. This is difficult, however, because (if I understand Heidegger correctly here) what prevents the discovery that the real – or being – manifests itself in *various* ways, is the tendency, on the part of Enframing (as indeed of every hegemonic revealing), to cover up or ‘hide’ other ways, as well as its own status as one such revealing (1977: 30). The danger is compounded by the possibility that humanity may

‘surrender’ its ‘free essence’ – its capacity to comprehend and live according to the privilege of understanding the alternating coming and going, the unconcealment and concealment, of different manifestations of the real (Heidegger 1977: 32).

As far as this interpretation of *Avatar* as an instance of film-art is concerned, it is significant that Heidegger places his hope that humanity will ‘not forget to remember’ (the multiplicity of ways of revealing being) in art as *poiesis*, because it is still very much part of the human world. As intimated earlier, he reminds his readers that technology and art as *poiesis* share a certain capacity, as evidenced in the ancient Greek word, *techné*, which was used to describe the ‘bringing-forth’ characteristic of art, among other practices, and which meant a ‘bringing-forth’ according to a kind of ‘knowing’ (Heidegger 1977: 12-13; 34-35). In fact, art appears to be a privileged domain where one may discover what it has in common with technology, despite their differences (1977: 35):

Because the essence of technology is nothing technological, essential reflection upon technology and decisive confrontation with it must happen in a realm that is, on the one hand, akin to the essence of technology and, on the other, fundamentally different from it.

Such a realm is art. But certainly only if reflection on art, for its part, does not shut its eyes to the constellation of truth after which we are *questioning*.

Hence it appears that Cameron’s film is predicated on several Heideggerian insights – those pertaining to the way that art and technology, at their inception among the ancient Greeks, were essentially conjoined, as well as on an understanding of contemporary technology as something that reduces people and nature to a kind of ‘standing reserve’ or resources which may be used for human consumption without any consideration of their own distinctive being or mode of existence. Small wonder that Heidegger depicts modern technology as an ‘assault’ on nature (and, one may add, on people). In fact, when Heidegger points out that the ‘essence’ of technology is what he calls ‘*Gestell*’ (Enframing, Framework, Mainframe), one may think of it as a kind of collective mindset on the part of humans, although it is more than that.

Everyone who has seen *Avatar* will know what I am talking about here, even if he or she is so much part of the technological mindset (‘Enframing’) that they see nothing wrong with it. They would also know where Cameron’s sympathy lies as far as the narrative outcome of the film goes. But, given the ‘action’-character of the film, one could easily overlook what I have referred to as its ecopolitical dimension.

Why ‘eco-political’, and not merely ‘ecological’? It is the latter, too, of course, in so far as it depicts ensembles of living things – from humans to Na’vi, plants and animals, to the planet Pandora (as well as Earth, which is alluded to in the film as a ‘dying’ planet) as a whole – as interconnected totalities of entities, where the latter are interdependent to the degree that no single entity can survive on its own. This aspect of an ecology is often overlooked, which is why it is commonly, and erroneously, identified with ‘the environment’.

It should already be evident from what was referred to earlier in the work of Joel Kovel (in *The enemy of nature*), however, that the ‘environment’ denotes the non-human environment, whereas the earth’s ecology, at its most encompassing level, includes humanity in its entirety. Within the planetary ecology there are millions of ecological sub-systems, all of them marked by the interconnectedness among a number of constituent members of the system, from the pupils and teacher in a Kindergarten class to a colony of birds on an island, and eventually all the living things on a planet, together with the sum-total of inorganic materials that they depend on, such as minerals and phosphates.

Avatar is not *only* an ecological film in the sense of thematizing the importance of acknowledging and respecting such interconnectedness of things. Think of Dr Grace Augustine trying to persuade the insensitive corporate representative and the monodimensionally military ‘Colonel’ Quaritch that the true ‘wealth’ of Pandora is the interconnectedness among all the Na’vi and the other living beings on Pandora – which, just at the level of the trees, amounts to the interconnectivity of a gigantic brain, with more ‘neuronal’ connections than that of a human brain – and not the subterranean (sub-pandorean) deposits of unobtainium that they are mining. Needless to say, the incomprehension on the part of these technocrats mirrors that on the part of real-world technocrats on planet Earth.

This is why *Avatar* is an *eco-political* film: both its narrative and its powerful (and beautifully rendered) image-sequences of (up to a certain point) ‘unspoilt’ nature in all its splendour and variety, exhort one, through the act of spectators identifying with the threatened characters and other living beings (including animals and trees – the ecological function of the latter symbolically subsumed under the gigantic ‘Home-tree’) to step beyond mere spectatorship and – like the character of Jake (Sam Worthington) in the film – stop being paralyzed in the face of the destruction of nature on planet Earth by uncomprehending and uncaring people intent only on profit at all costs.⁵ There should be no mistake about this: I am arguing that, through audience-identification with the protagonists in the film, it works powerfully to engender a ‘transformative’ experience on the part of audiences, allowing them to conceive of moving from a state of ‘paralysis’ (metaphorized in the character of Jake) to one of ecopolitical action, where the film could itself function as a kind of ‘avatar’ (an extension of Cameron’s self?) that could mediate transformative ecopolitical action. Whether viewers follow up their mediated experience of *Avatar* with social and (eco-)political action, is never guaranteed, of course, but it is possible.

To be sure, as a helpful critic has reminded me, the ecopolitical dimension of *Avatar* is largely *implicit*, in so far as its science-fiction fantasy-narrative is set on an imaginary planet, and it does not *directly* implicate political action on earth. And yet, I would argue that it is potentially all the more effective in this respect precisely because, ostensibly being removed from the familiar time and space of the social and natural world on earth, it works *indirectly*, through what Brecht called ‘alienation’ (effects, devices, techniques) – in this case the element of fantasy – to induce in audiences reflection and possible political action. Because of the increasing ubiquity of news concerning climate change and ecological degradation bombarding people through the media today, the very familiarity of information concerning the natural environment is bound to have a kind of numbing effect on those who assimilate it. Hence, when confronted by an ecological and ecopolitical theme, harnessed by the powerful images communicating a moving story set in a different time and place, one is likely to see things in a new light, as it were.

The following words on Cameron’s part clearly indicate that he understands what message concerning the meaning of ecological interconnectedness he is sending with *Avatar* (Yahoo, 18 January 2010):

Avatar asks us to see that everything is connected, all human beings to each other, and us to the Earth. And if you have to go four-and-a-half light years to another, made-up planet to appreciate this miracle of the world that we have right here, well, you know what, that’s the wonder of cinema right there; that’s the magic.

From this perspective, *Avatar* is not merely cinema magic, however, as Cameron should know. It can be read as a call to action which, like that of the fictional Na’vi under Jake’s leadership, must be intent on saving the planet. Time is running out for many species on this planet, perhaps for all of them, including us. And our (potential) descendants won’t thank us for our lack of action.

But there is more to *Avatar* than its eco-political dimension. Heidegger's argument concerning the provenance of the meaning of both art (considered as *poiesis*) and technology in the ancient Greek word, *techné*, clearly indicates that those practices which derive from *poiesis* and *techné* (respectively) are not, after all, totally incommensurable. It is therefore not difficult to understand all the varieties of art – from architecture and painting to cinema⁶ and the multimedia art of today – and literature as belonging under the aegis of *poiesis*, which has something in common with *techné* as a legitimate form of knowing. This opens the way for an understanding of what is at present referred to by the name of 'technology' as just *one* possibility of a practice that is rooted in the meaning of the word *techné*. In other words, 'modern' technology – which, for Heidegger, is an 'assault' on nature – as instantiated in the representation of mining and military technology used by humans on planet Pandora in *Avatar*, may not be the final word in 'technology'. Here I would argue that the film goes as far as suggesting an alternative conception of science and technology – one that is not hostile to nature and society, but beneficent instead. To be able to understand this argument, the film has to be approached through the lens of the relation between myth, science and technology, which is presented in an interesting configuration in *Avatar*.

Apart from the pejorative meaning of the word 'myth' (namely, 'false belief') myths are generally known to be stories or narratives that explain the origins of things ranging from the cosmos to animals and human beings, as well as the way they behave. So, for example, the ancient Greek myth of the titan, Prometheus, who stole fire from the gods to hand it over to humans, is a mythical explanation of the origin of human culture and society, where fire represents reason, inventive ingenuity as well as artifacts which differentiate between culture and nature. And one should not forget that 'Pandora' is itself the (ancient Greek) mythical name of the woman who, bearing a box or jar filled with 'evils', was sent to earth by the gods to avenge Prometheus's theft of fire, and opened it out of curiosity, in this way releasing its evil contents into the world. In its most encompassing form, 'myth' is a narrative (or a group of interrelated narratives) that comprises a framework within which people can find answers to their 'existential' questions, including those that involve moral directives which serve as guardrails to keep one from falling when buffeted by life's vicissitudes.

Against the backdrop of this understanding of myth, it seems to me pretty clear that the Na'vi of planet Pandora live a life guided by their belief in the mythical unity between themselves, their deceased ancestors and the rest of the creatures on the planet. This myth-oriented way of life is apparent in several scenes. Think of the one where Neytiri, having killed one of the 'wild dogs' in the process of rescuing Jake from them, pays homage to the wild animal before berating Jake about unnecessarily causing her to rob it of its life. The way she addresses the dead animal is an indication of an underlying (mythical) belief in a fundamental oneness between herself, her race and these creatures, and by implication, an encompassing nature. In other scenes one learns of the 'tree of souls', whose 'seeds', descending on Jake like a halo adorning him, represent what Neytiri refers to as a 'sign' of sorts (which grants Jake a temporary reprieve in the face of the Na'vi warriors' hostility). Again, although little information is provided in the scene about the place of this tree in Na'vi culture, it is clear that it occupies a central position in the mythical structure of their cultural beliefs. When Jake successfully mounts the red flying 'dragon' (for want of a better term) in an effort to win the Na'vi's trust, the audience already knows (from an earlier scene when this is explained to him by Neytiri) that he is tapping into a powerful mythical vein concerning the place of those exceptional individuals who can master this animal in their history.

One may wonder why these indications of the myth-oriented cultural life of the fictional Na'vi is at all relevant. For one thing, it contrasts starkly with the broadly scientific and

technological way of life of the human occupiers of Pandora – although it must be kept in mind that there is more than one sense of the word ‘science’ as far as the humans are concerned.

In one sense, ‘modern’ science manifested itself historically in the work of early scientists who approached nature armed with a mathematical grid for interpretation in the form of measurement, as Heidegger (1963: 69-77) argued convincingly in *The age of the world-picture*. Galileo put it well when he remarked that, if one wanted to understand Mother Nature, one had to understand her language, which is mathematics. Heidegger reminds us that it was this kind of science, namely mathematical physics, that enabled scientists to grasp natural phenomena by means of calculable relations, which, in their turn, comprised the basis for technological attempts at controlling natural processes. This kind of science, which paved the way for modern technology (which Heidegger saw as ‘ordering’ or ‘assaulting’ nature), was a mechanistic science in so far as its underlying model of nature was ‘nature as machine’.

More recently, though, a different conception of science has made its appearance – not only in relativity physics and quantum mechanics (both of which cast doubt on the ideal of ‘certainty’ in classical modern physics), but also, significantly for the film (*Avatar*), in the life sciences. Both Marilyn French (in *Beyond Power*; 1986)⁷ and Fritjof Capra (for instance in *The Turning Point*, 1982; and *The Web of Life*, 1996), to mention only two writers who have reflected on the implications of developments in biology, have elaborated on the increasing realization on the part of biological scientists, that nature is not like a machine (a metaphor implicit in Newtonian physics), but rather like a gigantic network or web of interconnected organisms. (It should be mentioned, in passing, that Renaissance artist-scientist Leonardo Da Vinci was the historical exception here – his conception of science was not mechanistic, and antedated the currently emerging complexity model of science, which acknowledges the interrelatedness of all things, by centuries.)

As I have already argued at length (but needs to be repeated here), such a vision of nature is essentially ecological. It is this conception of science – which is predicated on the interconnectedness of all things – that one encounters on the part of Grace Augustine (Sigourney Weaver), the biologist, in *Avatar* (and, of course, in mythical form on the part of the Na’vi). And its ‘technological’ counterpart is visible in the ‘knowing’ way in which the Na’vi are shown as drawing on the network of interconnected trees to activate and impart a certain life-force to the injured Grace, and later, Jake. Side by side with this in the film, however, one still witnesses the kind of technology that Heidegger saw as being inimical to nature as *physis* – nature as growing, proliferating beings coming and going in an endless cycle of birth and death – and which is not compatible with the new paradigm of science represented by Grace. It is evident in the operations of both the mining equipment and the military apparatus, neither of which leaves the soil and the living beings on Pandora in peace.

So – to return to what I have said about myth and science – how does one bring this together regarding *Avatar*? Here I would like to argue that one of Heidegger’s predecessors, Friedrich Nietzsche, affords one the philosophical means to situate a film like *Avatar* in the tension-field between science and myth. It is Nietzsche’s conception of science and of myth – illuminatingly discussed by Allan Megill (1985: 65-102) – that enables one to see that *Avatar*, as an artwork, communicates to audiences the Nietzschean insight (or belief), that a society, or a culture, needs a sustaining mythical ground to survive as a society. Further, that, while a science that is purely positivistic (in the sense of being no more than an accumulation of facts) would be inimical to the formation of such an encompassing mythical foundation, a different kind of science is conceivable, which would be compatible with, and even foster, the emergence of the latter.

Arguably, in *Human, all too Human* (Megill 1985: 65-71), Nietzsche's conception of such a science acknowledges that science cannot be only or exclusively analytical, but, while it has to be more rigorous than art, it should yield a 'sum of inviolable truths'. In short, Nietzsche was looking for a new mythical foundation for culture in science,⁸ because of his belief that a sustaining myth is absolutely indispensable for a culture to flourish and survive (quoted in Megill 1985: 75):

Without myth every culture loses the healthy power of its creativity: only a horizon defined by myths completes and unifies a whole cultural movement. Myth alone saves all the powers of the imagination...from their aimless wanderings. The images of the myth have to be the unnoticed omnipresent demonic guardians, under whose care the young soul grows to maturity and whose signs help the man to interpret his life and struggles.

But could science, which is different from, if not inimical to, myth in an important respect, be the basis of a mythical justification of culture? Jean-Francois Lyotard has shown persuasively in his classic text, *The postmodern condition: A report on knowledge* (1984: 18-27) that there is a fundamental distinction between 'narrative knowledge' (such as that of myth) and scientific knowledge. Scientific knowledge, Lyotard points out, is denotative or 'constative' in form – that is, scientific statements are formulated as descriptions of some kind, and may be judged true or false on condition that what they refer to must be repeatedly accessible, and that they be formulated in the language relevant to the field in question. The latter condition is always decided on by the scientific authorities or 'experts' concerned.

Knowledge is not restricted to scientific knowledge, however, Lyotard is careful to point out. It is a matter of 'competence' that pertains to 'knowing how to live', 'know-how', 'how to speak', 'how to listen', and so on. It also operates in a multitude of so-called 'language games' (a term borrowed from Wittgenstein), from descriptive utterances ('This is a frog') to performative ('I hereby declare you man and wife') and prescriptive ('Open the door!') ones. One might say that, the more 'knowledgeable' a person is, the more 'competences' she or he displays in pragmatic terms.

Among these 'language games' Lyotard singles out the varieties of 'narrative' as the linguistic form employed for transmitting 'traditional' knowledge. Significantly, these include popular stories such as myths or legends, which confer legitimacy on social practices and institutions, in so far as they provide the criteria used by a society to judge and evaluate certain competences and actions on the part of individuals.

Importantly, Lyotard remarks on just how accommodating the narrative form is as far as other language games are concerned – they 'easily slip into' narration. For example, in any story, one probably finds denotative (descriptive) statements about the surroundings in which the action takes place, interrogative utterances and implications (direct questions, as well as implied responses to questions and challenges), 'deontic' propositions (what the hero or heroine, or the listener, 'should' do concerning friends, family, different sexes, children, and so on), as well as evaluative judgments of various kinds. All of these 'language games' are governed by certain distinctive rules, without which they would not be recognizable as being different from others, and all of them can be accommodated in the narrative form.

Science is characterized, Lyotard (1984: 25) also reminds one, by the prioritisation of denotative or descriptive statements, but in light of the receptivity of narrative to denotative statements 'slipping into' its embrace, it is clear that a narrative could 'contain' such scientific knowledge – not as a (no longer credible) 'metanarrative' which serves to justify scientific knowledge by inscribing the latter in a legitimising (philosophical) 'story' (the postmodern being famously described by Lyotard [1984: xxiv] as 'incredulity toward metanarratives') but as a narrative within which scientific statements concerning the relation between humans, animals, plants, minerals and nature are accommodated (as explained earlier) without violating

the function of the narrative (or myth), namely to establish and maintain a ‘social bond’ (Lyotard 1984: 20-21).

This is where Nietzsche’s thought on myth, Heidegger’s on art and technology, together with Lyotard’s on narrative, and the conception of science encountered on the part of Grace Augustine (together with the Na’vi cultural myth regarding their interconnectedness with nature) in *Avatar* converge. First, *Avatar* is film-art, but not *just* film-art – it is unthinkable without advanced cinema-technology, so that one could say, in Heideggerian terms, that they combine in the film as modes of ‘bringing-forth’ the possibility of a different world. Secondly, just as Nietzsche, at one point in his career, tried to reconcile science and myth, the ecological science represented by Grace in *Avatar* is reconcilable with the cultural function of myth (specifically among the Na’vi), in so far as both have an integrative, life- and culture-promoting function. Similarly, one can enlist Lyotard’s characterization of the narrative form (*inter alia* that of myth) to explain more accurately why and how this kind of science is commensurable with the mythical matrix within which its denotative statements concerning ecological interconnectedness attain epistemic (and indirectly social) value.

In fact, it seems to me that one has here the reverse of what Lyotard (1984: xxiii-xxiv) sees as the (obsolete) function of a metanarrative, namely to legitimize denotative scientific statements. Instead, the descriptive propositional scientific knowledge (for example about the interconnections among living things constituting quasi-neural networks in nature) justifies the mythical framework constructed in narrative terms, in so far as it confirms scientifically what the myth-narrative claims or assumes. Could this be what Nietzsche was thinking towards in *Human, all too human*?

The question that *Avatar* raises and communicates to audiences in novel cinematic terms is therefore: can humans reach a point where the science and accompanying technology practised by them is reconcilable with the life-enhancing function of a sustaining myth, as Nietzsche saw it, and where this ‘new’ science vindicates the myth, or are we doomed to be caught in the deadly embrace of a technology which – if one considers the newly emerging paradigm of science – is nothing less than anachronistic?

Considering the important – indispensable, if we believe Einstein’s remark, that ‘imagination is more important than knowledge’⁹ – role of imagination in culture, a film like *Avatar*, together with the recent developments in science referred to, bears witness to the possibility that a new kind of technology, too, is possible – one that is compatible with living ecosystems, instead of being hostile to them. As such one may perceive the film as itself presenting a ‘myth’ of sorts, namely that of a world where people, animals and vegetation (together with inorganic materials) comprise an integrated nature, in regard to which a different kind of science and technology (which does not violate the ecosystemic totality) is mooted.

One may object that this is nothing short of a fantasy, or – worse, if one considers the vaunted ‘unity’ and encompassing ‘totality’ of such a world – unadulterated, indefensible ideology. I would argue, however, that *Avatar* is rescued from such a charge by a subversive element which is introduced into the narrative, namely the dual genetic composition of the avatars, of which viewers are informed early in the unfolding narrative. If Jake’s avatar contains both Na’vi and human genetic material, one may see it as a *pharmakon* (in Plato’s sense of poison and cure at the same time) – in due time, given his ‘mating’ with Neytiri, its human genetic potential could possibly lead to the same quest for technological mastery of nature on Pandora that is in the process of destroying life on planet earth (according to the film, and judging by some reports, on the actual planet Earth as well; see Kovel 2007).

If *Avatar*, the film, is therefore itself perceived as projecting a myth, intended to provide existential parameters for humanity, today, it is a worthy myth in so far as it is not committed to any dream of (impossible) purity, but – like the ‘Eden’-panel of Hieronymus Bosch’s triptych, *The Garden of Earthly Delights* – already contains the seeds of ‘evil’ or (possible) destruction in itself. And like all myths which acknowledge the complexity of the human condition, it would therefore not merely be the narrative representation of an idealized, desired way of living, but simultaneously serve as a *caveat* regarding incipient sources of destruction of that very way of living, not least because of the two modalities or kinds of science, powerfully represented in the film at both narrative and iconic levels.

Appendix

The narrative of *Avatar* takes spectators to Pandora, a fictional planet of breathtaking natural beauty and botanical as well as zoological biodiversity. The indigenous population of humanoids, the Na’vi, live a life of relative harmony and interdependence with the other living beings on the planet, and one is struck by their reverence for life, as witnessed in their acknowledgement of other creatures’ sacredness when they have to hunt and kill them for their own survival (reminiscent of the San people’s, or Bushmen’s bond with the living beings that they depend on for survival). Into this world of savage beauty come humans with the overriding purpose of mining a precious metal appropriately named ‘unobtainium’, of which there are rich deposits in Pandoran soil. In a manner that recalls the ambivalent strategies of terrestrial colonization (by the English, the Germans, the Dutch, the French, the Spanish, Portuguese and others), they practice a two-pronged policy towards the Na’vi – on the one hand, they try to win their cooperation and confidence through the provision of ‘education’ and medical aid (neither of which the Na’vi want), while, on the other, they adopt a military stance which allows them to gun down the Na’vi whenever they get in the way of lucrative mining operations. One of the strategies employed by humans in their effort to make the Na’vi more amenable to their profit-driven actions, is to make use of ‘avatars’ or genetically engineered substitute Na’vi ‘bodies’ (which contain Na’vi as well as human genetic material – an important fact, considering the possibility of engendering offspring with indigenous Na’vi), by means of which humans can enter the otherwise inimical Pandoran atmosphere (in which they cannot breathe) and interact with the locals, while the human ‘controller/driver’ is lying in a kind of electronic cocoon at base. This is where the character of Jake Sully (Sam Worthington) comes in. Jake is a paraplegic marine, who takes the place of his brother (who was killed before he could take up his contract) in the avatar programme on Pandora. For Jake the opportunity to walk again, albeit with an avatar-body, is exhilarating, and when things go awry with his first mission, he is rescued from ‘wild dogs’ by Neytiri (Zoe Saldana), the daughter of a Na’vi chieftain, who rebukes him for forcing her to kill one of the creatures superfluously. Neytiri is given the task of teaching Jake the Na’vi ways, much to her dismay, as well as that of the young Na’vi warrior who has been identified as her future ‘mate’. When the leader of the avatar programme, scientist Dr Grace Augustine (Sigourney Weaver) learns of Jake’s incipient integration into the Na’vi, she is delighted, given her genuine scientific interest in understanding them and their relation with the planet’s bio-diverse living beings. Colonel Quaritch (Stephen Lang), the (military) chief of company security, is equally delighted, but for different reasons – he wants the requisite military ‘intelligence’ from Jake to be able to strike the Na’vi if they cannot be persuaded to leave their present home, called Hometree (a colossal tree that towers over the rest of the vegetation in the forest) because the richest deposits of unobtainium are underneath the tree. To cut a long story short, Jake (or rather, Jake’s avatar) passes the gruelling ‘initiation tests’ and is accepted into the Na’vi. Predictably, he and Neytiri have fallen in love, and in the process he

has also fallen in love with the Na'vi ways, so that he no longer wishes to betray these people. Consequently, he tries to prevent the Colonel from destroying Hometree, but fails in the face of the overwhelming military might of the humans, who do so by firing rockets into the base of the tree, sending the surviving Na'vi fleeing into the forest. When the Colonel finds out that Jake has switched sides, he 'disempowers' Jake by disconnecting him from his avatar (which, as a result, collapses helplessly among the Na'vi, to their consternation), but Jake, together with an avatar 'cocoon', is taken by helicopter to a remote part of the jungle by his friends (including Grace), from where he can rejoin the Na'vi, in an attempt to defend the humans' next target, namely the 'tree of souls'. In the battle that ensues between the heavily armed humans and the Na'vi – this time joined by the animals on Pandora (apparently in response to Jake 'connecting' with Eywa through the tree of souls) – the Na'vi and their allies prove to be victorious in the end, and the humans are sent back to earth (described as 'their dying planet'). Finally, Jake's life-force is transferred via intensive interconnectivity (if I may call it that) to what used to be his Na'vi avatar body (a process also attempted with Grace, who had been seriously wounded, but who died in the process).

Notes

1. See Appendix for a summary of the film narrative.
2. See in this regard Olivier 1992.
3. 'Decode' here means 'interpret or understand in terms of identifiable codes', whether these be 'cultural' codes (for example a certain country's national flag, or a hat that is associated with a specific nationality), or cinema-specific codes (such as accelerated montage – a sequence of images that succeed one another at an accelerating rate). See Andrew 1976: 219-224; Olivier 2009.
4. It would be erroneous to think of *only* those activities that appear, conspicuously, to belong to the sphere of technology, as exemplifying the manifestation of the real that is peculiar to Enframing.– such as developing more ergonomic car and aeroplane engines, faster trains and cars, as well as better means of telecommunication, for example internet communications systems and mobile phones. Melchert's (1991: 576) remark, that not even religion escapes the rule of Enframing could be extended to sport, business and entertainment, too. This is evident in the 'testing' of athletes' and other sportspeople's physical abilities, in order to assess the enhancement of their 'performances' by means of a variety of ingested substances, legal and illegal. It is further evident in the pressure that people in business face on a daily basis to 'perform' in such a way that profits are maximized. The entertainment 'industry', too, employs criteria of technical perfection as far as the role of technicians, actors and special effects are concerned. Even education is subject to this drive towards optimal performativity, in so far as this can be 'measured', whether at school or at university level, where students are constantly subjected to various ways of testing their performances. In an earlier era, the justification of education was still formulated with a view to enrichment of the individuals concerned – recall the ideal of cultivation or *Bildung* (Gadamer 1982: 10-18), and consider that, under the sway of Enframing, such justification has disappeared. Performance – what Lyotard (1984: 41-47) calls 'performativity' – is decisive. Educators who have been thoroughly rationalized or subjectivized according to this norm of performativity, would probably not understand what one means by insisting on some kind of prior, non-technical 'justification' of education oriented according to technical criteria of performance (of which 'outcomes based' education is a conspicuous embodiment: 'At the completion of this course the student will be able to...').
5. One does not have to be an action hero to do this. It can start with something as simple as refusing, wherever possible, to use plastics in any form, and encouraging shops to provide paper or cloth bags for groceries, for example. Once proclaimed the miracle of polymer science, plastics have turned out to be one of the most nature-destructive materials ever produced by humans. When dead albatross chicks' stomachs are cut open, they are often filled with plastic bags and the like, which these birds unwittingly ingest, at their peril. If it is indeed true that Cameron is profiting from a deal with MacDonalds, to sell millions of plastic figurines of *Avatar* characters, he would have to face the contradiction between the meaning

of his powerful film and this action, which is incompatible with it.

6. Perhaps one could see, as I have argued before with reference to Cameron's *Terminator* films, in contemporary cinema the signs of art as *poiesis* and the *techné* of advanced cinema-technology merging, with salutary consequences, in so far as audiences can experience such cinema as something neither exclusively artistic, nor exclusively technological, but as both at the same time. See in this regard Olivier 2002.
7. French (1986: 542-544), for instance, elaborates on the contemporary (properly *post-modern*), emergent conception of nature as an almost unintelligibly complex, open, interconnected totality of interrelationships.
8. Eventually he abandoned this oxymoronic faith in science, and tried to provide the world with a new myth himself, in his masterpiece, *Thus spoke Zarathustra*, but that is another matter; see Megill 1985: 82-84; Olivier 2007.
9. The full quote reads: 'I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world' (Einstein 1929).

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Bert Olivier is Professor of Philosophy at the Nelson Mandela Metropolitan University in Port Elizabeth, South Africa. He holds an M.A. and D.Phil in Philosophy, has held Postdoctoral Fellowships in Philosophy at Yale University in the USA on more than one occasion, and has held a Research Fellowship at The University of Wales, Cardiff. At NMMU he teaches various sub-disciplines of philosophy, as well as film studies, media and architectural theory, and psychoanalytic theory. He has published widely in the philosophy of culture, of art and architecture, of cinema, music and literature, as well as the philosophy of science, epistemology, psychoanalytic, social, media and discourse-theory. In 2004 he was awarded the Stals Prize for Philosophy by the South African Academy for Arts and Sciences, in 2005 he received the award of Top Researcher at NMMU for the period 1999 to 2004, in 2006, 2008 and 2009 the award for Faculty Researcher of the Year in the Faculty of Arts, and in 2008 as well as 2009 that of Top Researcher of the Year at NMMU.