Digital ontology and the architectural monstrous

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ABSTRACT:
This paper aims to connect a reading of Francisco Goya’s painting *Vuelo de Brujo* with Marco Frascari’s metaphorical exploration of the idea of ‘monstrosity’ in architecture in *Monsters of Architecture* (1991). It also seeks to connect these works to contemporary forms of digital monstrosity and the proposition that the existential anxiety explored within current digital representations of the monstrous have both their basis in the technical apparatus within which they are created, and current thinking on material realism in ontology. Given the emergence of complex forms of ‘life’ within Cellular Automata studies and the speculations regarding digital ontology stemming from Stephen Wolfram’s *New Kind of Science*, the paper also asks what the consequences of large-scale expansions of these capabilities will entail in a post-Singularity scenario.

KEYWORDS:
Monsters, Architecture, Digital Modelling, Singularity, Digital Ontology
1. The Monstrous

“(monsters) … are the joint between physical reality and artistic expressions. Architecture is not an art but an understanding of arts that enables men to produce tangible expressions. Architecture is the monstrous frame of the “depiction” of life.” (Fracari, Monsters of Architecture, p.17)

The idea of the monstrous in architecture, while not a common thematic, is not new. It appears most clearly in Marco Frascari’s Monsters of Architecture (1991), but is present in such diverse forms as Venturi’s Duck/Decorated Shed analogy; Gehry’s fish trope; even in the work of the Expressionist movement in the 1920’s such as Hermann Finsterlin. For Frascari, it is a distinguishing feature of architecture that it is tied to the material organicism of the world, all those complex geometries that stem from corporeal forms of life, human or otherwise. Frascari implicitly considers the relationship between creative bricolage of the corporeal and the architectural to occur in an intellectual space that exists in contrast to the school of thought that considers architectural design to be a product of tectonic craftmanship situated within an economy of production.

Fracari identifies a simple question in architectural history and theory: why are there complex geometries that are neither simple to construct or inexpensive to produce? Frascari answers this question by pointing to the process of documentation that architecture employs, from isographic to scenographic means of representation, and to the evidence of semantic fragments employed in the ‘language’ of architecture. A favourite phrase of his ‘the techne of logos and the logos of techne’ describes a limit of what architecture can communicate and its means of doing so. In this phrase techne is not limited to technical production; it is a method of ‘constructing’ engagement, of arraying metonymic fragments that may be recognised as signifiers of other entities.

For Frascari, the process of uncovering and constructing these fragments is the work of the architect that looks for the liminal and monstrous. Frascari’s ‘demonstrations’ of this process involves the reading of a number of anthropomorphic and idiosyncratic works, Alberti, Scarpa, Stirling, Scolar for example, whose formal approach to architecture is read through the lens of monstrosity and an architecture parlante, recognisable from the work of Tafuri. Where this paper hopes to contribute to Frascari’s text is in three forms: what is the language of the monstrous, what are the techniques available in digital modes of creation and representation of the monstrous and what are the characteristics of digital ontology that these ‘monsters’ imply?

The first form is one that can only be barely covered in this paper, but it is a necessary prerequisite for the second and third. A criticism that might be directed towards Frascari’s analysis concerns the definition of the term ‘monstrous’, or even a discrimination of what subtleties of ‘monstrosity’ might exist within the examples. In many respects the problem with evoking the idea of multiple iterations of the monstrous is that it does not necessarily present the case that these examples share obvious characteristics and the reader is left to reconstruct the sensibility that brought them together in Frascari’s mind. While this is not a bad thing by any token, since it allows for some Barthesian engagement between author and reader, this should not exclude more fine-grained discussion of the characteristics of the monstrous. Following this, and this point cannot be taken any further at this juncture, is there not a rich linguistic history that engages architectural elements with their proper nouns whose etymology is redolent with associations? Terms such as triglyphs, metopes, capitals, pediments, volutes, aedicules, to name a very small selection, point to subtleties of surface and form in architecture.

To discuss this in another way, if we were to consider the nature of how an architectural digital ontology is apprehended, it is clear that a proposition or event that might be characterised as ‘monstrous’ is, by definition within a formal ontology, one that presents irregularities of recognition and definition. For example, in his interesting essay ‘A New Kind of Philosophy, A Manifesto for Digital Ontology’, (in Irreducibility and Computational Equivalence Ten Years After Wolfram’s A New Kind of Science, Zenil,
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(ed.), 2013) Jacopo Tagliabue describes the consequences of thinking through Stephen Wolfram’s *New Kind of Science*, its grounding in the outcomes of Cellular Automata studies, and the implications it has for our apprehension of the ontology of complexity. Tagliabue employs a specifically architectural metaphor to describe our encounter with a complex form, a cathedral constructed from LEGO bricks, to discuss our ability to discern causation, summation and implications. He does this in order to understand why and how the seemingly complex phenomena of experience are the consequences of a finite set of *indivisibilia* that display finite qualities. In the cathedral example, he proposes that in seeing its array of buttresses, gargoyles, triforiums, etc, intuition tells us that this array (Tagliabue references David Lewis’ intuitions) should be recognised as the consequence of a series of mechanical transformations – sequential construction using LEGO bricks, rather than the singular consequence of being one large, undivided ‘cathedral’ brick.

Tagliabue’s, and this, essay is primarily concerned with digital processes and the ontological planes they inhabit, however this is not an argument about the philosophical canard of ‘the one and the many’, it is instead a consideration of how the appearance of the unified cathedral might be construed outside of the philosopher’s thought experiment proposed by Tagliabue. By fusing Frascari’s interest in the encounter with material architecture that he suggestively characterises as an instance of the monstrous, with the opportunity to discuss emergent forms of architectural complexity, there is the possibility to do two things. Firstly, it allows us to see the value in Frascari’s pre-occupation with architectural examples that did not cohere to an historical or typological consistency. We might even, though it is not crucial to this argument, allow Frascari to have ‘intuitively’ recognised the non-compliance of certain architectural forms and processes from contemporary paradigms. Secondly, it encourages us to seek a more granular engagement with Tagliabue’s architectural metaphor, because, it is not clear that the options offered for understanding the LEGO cathedral are exhausted by his analysis, at least from an architectural standpoint. Is it really so simple to determine whether the phenomenally rich experience of architecture is reducible to increasingly sophisticated models of its material production available via a digital universe?
So while Frascari looks to the employment of a variety of corporeal and associative matter in architecture, I would like to add some observations on the evolution of this approach within contemporary digital culture. My argument, put simply, is that the means of representation and formal exploration afforded in digital culture is inherently monstrous in ways that Frascari’s text does not imagine. Digital form produced through 3D modelling environments has a formal and ontological complexity that the conventions of representation Frascari engages with cannot match. The following discussion places a series of digital images in the context of their influences and speculates on the relationship between their variety, the techniques for producing them and, finally, notes the opportunity for thinking about architectural monstrosities in circumstances of a focus upon the ontological nature of their appearance.

Apart from Frascari, a second point of reference for examining the emergence of digital monsters comes from the work of Francisco Goya, and in particular the work produced in the late eighteenth century for the Osuna family in Spain, in particular his work that documents the fabulae of witches, demons, etc. Whilst Goya himself was not given to a belief in supernatural entities, he recognised a significant appetite amongst his patrons for the macabre and sinister aspects of folk tales and the emergent neo-gothic sensibility that was to characterise aspects of early nineteenth-century culture in painting and literature. I have analysed the specific relationship between Goya’s work and that of Frascari in another paper, (Pickersgill, ‘An Architectural Singularity, Digital Monsters of Architecture, Ultima Thule: Journal of Architectural Imagination, V2No.1, 2012), in which I argue that the co-existence
of the real and the monstrous in the same image, rendered with the same level of painterly attention to representation, creates a significant ontological paradox in the viewer.

In that paper I argue that Goya’s painting of *Witches in the Air* of 1797-98 both describes folkloric fears of the supernatural powers of witches in eighteenth-century Spain as well as the general fear, according to Robert Hughes, that in the vicissitudes of everyday life there was a real possibility of the appearance of powers that were both malevolent and irrefutably present (Robert Hughes, *Goya*, 2003, p.156). What is particularly insistent in Goya’s image, and that of his capriccios and notebooks generally, is the manner in which the horrific act being perpetrated on the man in the centre is rendered with profound lucidity. We see the act of consumption as an event within the space of the canvas, the light portraying the musculature of the witches and their victim to the exclusion of the surrounding environment. The two figures below, aware of and aghast at the event, are support characters for the scene, grounding it in an indexical moment for which they are both audience and, for the viewer, character actors.

The image is insistently real, and the sense of horror it conveys emanates from the central grouping to the point that it casts a psychological, but not a physical, shadow over the scene. Whilst the terrified man below, shielding himself from the event, casts a shadow on the ground, the witches themselves do not, nor does the body of the victim. The viewer sees the simultaneous reality and impossibility of the scene in which the event takes place.

There is also, a form of double seeing presented here that is common within images, in which the viewer is intended to participate in the emotional engagement acted out by the support retinue, the two figures on the ground. This trope is a common device in the western pictorial tradition, and is usually reserved for the themes of special significance, in which the task of the painting is to convey a truth regarding an event in addition to issues of mimetic fidelity or exploration of convention. So the viewer is both seeing the horror of the characters who are unwilling witnesses to the monstrosity, and simultaneously experiencing their own sense of revulsion.

An open question we can consider in this context, for both the *Witches* painting and that of the incarceration images is this: Is the architecture passively contributing, by inertly framing, the appearance of the inmates’ *(in)humanity*, or is it actively causing it because of some monstrous aspect of the architectural? I think the quote from Frascari that heads this paper is instructional in this sense.
“(monsters) … are the joint between physical reality and artistic expressions. Architecture is not an art but an understanding of arts that enables men to produce tangible expressions. Architecture is the monstrous frame of the “depiction” of life.” (Frascari, *Monsters of Architecture*, 17)

3. Figural and Moral Monstrosities

Goya’s *Witch* painting paradoxically, like other paintings of madness from the late eighteenth century such as those by Gericault, point towards a transformed human body whose actions and gestures are either parodies of order or taxonomies of the difficult encounter between the regularities of communicative gestures and those aberrant gestures that seem meaningless. Just as Wittgenstein realised that there was no logical picturing of a world in the communicative gesture, which nonetheless was complete in itself. (a shrug of the shoulders does not a stand in for a sentence such as ‘I don't know’ since it can contextually say so much more, it is a bodily expression of incommunicative communication). So the gestures of the figures within the scene of in-communication are those of an ‘other’ state.

The various postures of the figures within Goya’s incarceration paintings are those of gestural communication. They are a *tableau vivant* of inscrutable inner monologues composed by Goya to demonstrate the heterogeneous manner in which psychosis is manifested. Following Frascari, architecture is perhaps the ‘monstrous frame’ of this though, it could be argued, this architectural frame is not the hazy contextual construction in the background, but the bodies of the incarcerated themselves.

![Figure 5, Machineman, Author, 2011](image)

What is also highlighted by these surfaces of communication is the distinction between figural and moral monstrosity. If we consider the premise of Goya’s incarceration images to be a survey of the moral turpitude of the inhabitants, and the conjoined sense of attraction and repulsion experienced in recognising the state of the figures, then the tumult of bodies (their figuration) demonstrates their ontological plight. Who they are is shown in the actions they make.

In the *Witches* painting, the morality is less clear, since we have both human and inhuman beings rendered equally vividly. The figuration of the monstrosity, the shaping of their bodies, is ambiguous in its emphasis on whether we are to be horrified at the figure being consumed or to recognise the bodily exertions of the witches and empathise with their efforts.

Reading Frascari’s proposition with regard to this painting is less straightforward as the question of where the ‘architectural’ lies is not immediately clear. In the absence of obvious built structures that might show that this is a structured environment in which the events are governed by the built surrounds, the ‘architecture’ may again be the surface of the bodies of the actors within the image.
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The frame and architecture collapses together, much in the fashion of Derrida’s parergon (The Truth in Painting, 1987), by showing what is ‘outside the work’, and hence acting as a frame, is the surface of the figures. This figural surface is the architecture, the formal governance, which brings to presence the monstrous state of affairs that is occurring. We can make this argument because it is clear, given the premise of witchcraft that the painting wishes to communicate, to tangibly express, the scintillating fear of the monstrous within the everyday.

So from the inky blackness of the scene emerge two depictions of ‘life’ that exist in the virtual space of the canvas: the everyday and the diabolical. They are entwined with each other in a way that Goya has intended to be quite clear and present. Architecture is then, in my reading, the frame that can present both the real and the monstrous/diabolical in the same space and under the same conditions of ‘reading’ the surface of the figures.

The purpose of the analysis and reading of Goya’s images through Frascari’s discussion of architectural ‘monsters’ is to show a chain of thinking that has underpinned the Machinehead/Machineman images included in this essay. Not only are there cosmetic similarities between the painting and the digital ‘creatures’ created by the author inasmuch as they both exist within a stateless black field, and not only do they attempt to show the co-location of real and monstrous beings, they both propose an imaginative state of affairs that is unreal and yet depicts life. Where Goya, completely successfully and with a masterly sense of drama, locates witchcraft and the everyday together, the author images attempt to make a proposition regarding the incidence of the monstrous, the figural and technology in the same space. The hinge proposition that links the Witches in the Air painting of Goya with the work undertaken for the Machinehead/Machineman images is this: Can we find the architectural in the space of digital modelling, and is it inherently monstrous?

To address this fully it is necessary to examine a few issues regarding the state of digital simulations of the real, and the vehicles through which these simulacra are brought into being.

Figure 6, The core of the Event Horizon, Event Horizon, Paul W.S. Anderson (Dir.), 1997.

4. Hell is only a Word

You know nothing. Hell is only a word. The reality is much, much worse.
(Dr. Weir (Sam Neill) in Event Horizon, Dir. Paul W.S. Anderson, 1997)

In Paul W. S. Anderson’s 1997 film Event Horizon, the crew of a rescue ship travel to recover a special spacecraft, the Event Horizon, which has reappeared after having disappeared some years earlier. The film works within the space horror-survival genre with the narrative providing a series of staged scenes of violent grande guignol in the process. For the purposes of this essay, it is interesting to consider the final proposition of the film (spoiler alert), that the Event Horizon gains a form of consciousness and
annihilates, then resuscitates, the human crew it encounters. Dr Weir, as principal agent of the ship’s consciousness, communicates to the remaining survivors the reality of what is in store for them. While the science of the film is barely credible, what it does draw on is two things of interest for this essay: the concept of the monstrous and the development of this state from the technological premise intrinsic to discussion of Cellular Automata of computational irreducibility, and of the projected interrelationship between technology and organic life discussed in the concept of Singularity.

Figure 7, Hell within the Event Horizon, Event Horizon, Paul W.S. Anderson (Dir.), 1997; Figure 8, Machinehead, Author, 2011

Computational irreducibility refers to the premise, as discussed by Tagliabue regarding Wolfen’s New Kind of Science, that many of the experiences of indeterminacy in the world, particularly the notion of free will, are the product of a tension between digital models and the lack of an explanatory schema to account for behaviour that may well be deterministic. Whether this is true or not, or whether it disturbs questions of moral authenticity in the real world, the suggestion that the appearance of indeterminate vagaries within a constructed digital universe that is rehearsed with the narrative space of film, and which might in fact be the consequence of large-order cellular automata models, is interesting. It seems to speak not only to the possible plausibility of the Event Horizon narrative, if that is worth considering, and of the more real effect of the fear of the monstrous in the mind of the viewer that it plays upon. Specifically it speaks to the suppressed premise that the event’s plausibility might indeed entail mortal annihilation. Frascari’s challenging medieval categorisation of indeterminate architectural form as ‘monstrous’ reminds us of its societal association with existential fears of the indifferent or insubstantial value of our own lives and their vulnerability to destruction.

5. A Game of Life, But Not As We Know It

In a different sense, Computational Irreducibility and Singularity are terms that describes current futurist thinking regarding the likely advances of technology within contemporary society and of the mapping of their epistemic content. Following the general principle of Moore’s Law, proponents of Singularity such as Ray Kurzweil (Kurzweil, The Singularity is Near: When Humans Transcend Biology, 2005) argue that a statistical analysis of developments within computing power and medical science are producing possible scenarios in which both artificial intelligence that has self-consciousness and is communicative is possible, and that human life and consciousness is extendible by virtue of developments in nanotechnology. The latter is not possible without some version of the former and, in Kurzweil’s view, points to a form of augmented ‘transhumanism’ in which human experience will increasingly by moderated via digital prosthetics to the point where humanity and technology will converge, or at least become existentially unproblematic.

The discussion of Cellular Automata and the life-worlds it can generate is less problematic as it is grounded in a significant body of study since the seventies, but it remains unclear what direction in understanding will necessarily evolve from this work. It is, undoubtedly however, of significant heuristic
value in providing a reminder of the inherently synthetic nature of complexity, especially when that capability is harnessed with the algorithmic power of 3D modelling. If the evolution of a taxonomy of actors within the Game of Life is a proof-of-concept of the possibility of spawning a number of discrete agents, what then of its inclusion in more complex representational environments? Luciano Floridi, in an article (Against Digital Ontology, Synthese, (2009) discussing categorical distinctions between digital ontology and informational ontology, makes the point that the study of digital ontologies and the implied causal universes they describe is not compromised by the level of abstraction they represent in comparison to the experience of the analogue world.

Whatever the legitimacy of the propositions surrounding Singularity, and it has significant critics that argue that convergence is not necessarily a given consequence, and that developments themselves may also operate in a chaotic, or at least non-linear fashion, the proposal that forms of technology are simulations of human instrumentalties is not problematic. Where the development of the Event Horizon was directed towards an abrupt state of visceral enslavement by creating a crew of monstrosities - the existential anxiety at the heart of the story's horror - Kurzweil sees a more benign and systemic relationship. It is possible to agree, I would argue, that the modes of form-making employed in digital space are approximations of existential world-making that mirror, however imperfectly, our own ontology. The employment of these tools (3DS Max, Cinema 4D, Maya) allow for the construction of virtual entities, objects, physics and spaces that are simulations of our own spatial perceptions and which are, importantly, the visual consequences of a series of algorithmic expressions. Where Frascari's monsters occurred beyond the mathesis of regular forms of architectural drawing, the monstrosities of digital modelling are always, already tightly governed by the capabilities of the application, They are not random in the sense of them being inexplicable, yet there is a widening gulf between the programme's ability to deliver a sense of formal complexity and an individual's ability to see the chain of causal commands that brought the forms into being.

Discussion of the effects of Cellular Automata, and to a degree Singularity, on a programme such as 3DS Max, or similar, can offer a number of different evolutionary scenarios of how the programme may evolve. The core functionality present in the application, in which the GUI presents a complex array of formal opportunities for development may well change to offer more intuitive gestural interaction; seamless production of rigging, physics and animation; enhanced rendering and texturing, etc. Singularity, one would presume, would direct developments towards the streamlining of workflow to achieve an array of standardised solutions with increasing ease, presuming the application remained a passive instrument. It is not an impossible thought, however, to imagine that data sets of virtual figure, environment and world models, if converged, would display consistent characteristics. For example, the relationship between the PC game community and the modding community is built on shared assets inherent, for IP reasons, within the game – but developed further by the fan base. These data sets tend to have consistent characteristics in terms of terrain modelling, asset modelling, AI, game engine functionality, etc., and could conceivably be subjected to scripted generation. In the post-Singularity world, it is conceivable that future, procedurally-processed generations of these environments, like some vastly complex form of greeble, can be brought into existence without user intention or interaction.

6. The Question of Monstrosity

When we consider the possible intersection between the forms of digital modelling employed in the architectural imagination industries and the question of how we apprehend them as part of our ontological understanding of their ‘world’, the perception of what constitutes a ‘monster of architecture’ is a very engaging question. In particular, if we take the view of Manuel de Landa regarding his realist ontology of virtual assemblages, we can imagine a scenario in which monstrosities of various material and formal qualities come to populate a world developed by an organised non-human entity, and which is ontologically vivid for us. Arguably, they have a palpable sense of ‘catalysis’, de Landa’s term for an actuated series of effects whose properties are topological diagrams of possibilities, but not of mechanical (linear) causations. At the risk of presenting an argument for solipsism, one’s ontological
engagement with these topologies can present an infinite (though statistically limited) series of assemblage-states for interrogation. Goya’s witch painting, the narrative dénouement of Event Horizon and, humbly, the images by the author are ‘objects’ that clearly infer some relationship between their monstrosity and the vectors of phenomenal apprehension they present.

This is what de Landa has termed the ‘skyline’ of an expressive surface, a term that Graham Harman has addressed in his critique of de Landa’s ontology (Harman, 2008). Harman, as a proponent of Object Orientated ontology, presents the argument that objects exist, like de Landa’s assemblages, at an infinite series of scales independent of anthropocentric measures and whose properties are not exhausted merely by our apprehension of them. So, in this sense the ‘skyline’ is both a surface of appearance as well as an array of possible future material changes potentially catalysed by the specific attention to an ‘object’s’ potentialities.

Unremarkably, really, what sounds like a form of complex metaphysical philosophy describes quite precisely the encounter with the complex virtual assets of digital worlds, in which their state of appearance is incubated within the 3D modelling application. When the agency of that development itself is no longer anthropocentric, as in the Post-Singularity example, one wonders what objects will hylomorphically emerge.

So when we consider the propositions of Cellular Automata and Singularity, we can ask what forms of complex simulations of the Real might occur, or more accurately, might be grown in a future in which Moore’s Law has delivered exponentially greater levels of digital expression. When forms of AI are encouraged to express themselves within digital space, what levels of complexity and instrumentality might occur? Will we even be able to recognise existential presence?

The monstrous, then, is the recognition that there are digital universes, of increasingly fine granularity, in which we may not be able to discern whether the events are truly the product of some sublime unfathomable agency that is indifferent to our anthropomorphic ontology, or whether we simply cannot yet see how apparent monstrosities might be exorcised by understanding and acknowledging the indivisibilia inherent within their form. But what remains crucial, and for this reason reminds us of the value of Frascari, is that the pursuit of the monstrous is an obligation of the intellectually aware architect.

7. Machinehead/Machineman

The images produced by the author for the To the Islands exhibition (Harvey and Pickersgill, 2011) captioned here as Machinehead/Machineman attempt to chart some of these ideas. They are the products of a form of gestural encounter with beings that are sentient, communicative, but are also family relations of Goya’s witches.

![Figure 9, Machineman, Author, 2011;](image)
The black environment they emerge from is the state of communication independent of context. Like Beckett’s ‘mouth’ they are simply there.

Moreover they are representations of the encounter with the apparently machinic and the apparently corporeal. For this reason also, they are completely about the limit of what might be considered architecture. As the product of a tool that is now employed by a number of forms of practitioners within the imagination industries, they are imaginings on what are the limits of monstrous architectural form might be.

In a recent paper *Inside Solaris* (Pickersgill and Moore, 2007), the authors pointed to the idea that the encounter with digital witches of these sorts involves a form of Adamic encounter. In essence this is the only novelty that the visual work and this paper hope to present. That in digital space the material ambiguities of language and surface and gesture are concentrated by the very nature of the medium through which it is created. While Goya’s images are constructed as a cooperative relationship between light and dark that is painted onto the surface of the canvas, in the digital space from which these works emerged, they are only present by virtue of the algorithmic calculation of the representation of light upon form. Each apparent spatiality, each apparent gesture of chiaroscuro is the process of geometric and lighting calculations embedded within the modelling program. And each of these, it can be argued, blurs the distinction between architecture and life.

8. Conclusion

The final conclusion that may be drawn from the transhuman process of creating these figures is the argument that while they are indeed the imperfect product of a visual tradition of which Lucian and Goya are a part, they are also the outcome of a series of topographical gestures that interrogated some idea of the limit of the encounter with representations of the visceral and the machinic. The imagining of monstrosity follows sufficient rules for it to be statistically stable and, as the machine images sketch out, be reproducible given the possibility of sufficient monstrous variants that may be produced.

Singularity, as a description of the immanent direction of future encounters with technology, projects our thinking towards a state, or series of states, in which the capabilities of digital processing exceed that which we are individually capable. In a pre-modern, and pre-digital world, such as Goya’s, the representation of the monstrous and the horrendous was the responsibility of the individual artist. This artist, whilst not the individual perpetrator of these events is the witness to their occurrence, and the recorder of their power in effecting deep emotional anxieties over our grasp of the world. If they serve any moral purpose it is to commend us to remember the state of disarray that we can so easily occupy individually. More organically, they terrify us because of their plausibility. In the current world of pre-Singularity that task is given over to the cooperative environment of many: the digital production team, from concept to modelling artists to animation technicians and texture artists. *Event Horizon*, as with all forms of CGI from the most basic to the most complex, make the collective proposition that the limits of the Real is best tested within a narrative. The terror of the narrative is orchestrated by a large team of individuals directed towards ensuring the vividness of the world within which events take place. This is not to say that the moral and ethical worlds are the same.

In the post-Singularity state, endemic monstrosity might be the product of the processes themselves and be removed from the responsibilities of the entertainment industry alone, they may become the expression of our own contest with transhuman ontologies. The monstrous and its space of appearance will undoubtedly follow a number of structural limits that it is the role of future programmers to create, but like a form of extreme Haunted House, the Hadron Collider meeting the Carnival, it is possible to conceive of a thought experiment in which the scale and persistence of digital monstrosities of a global scale might be the new existential frontiers to be encountered.
References


