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ARTICLE**NODE: "THE MATTER WITH MEDIA"**

Machine Voices

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Abstract

There are tensions, apparent to us now as never before, between the polished gloss of consumer technologies, their intuitive design, their smooth interfaces and the hard, angular and unforgiving infrastructures of programming, electronics and electrics which make them possible. Ongoing industry directions to cluster and integrate in services such as Apple's iCloud present disparate agents as one unified object. This ideological project of gathering, abstracts users ever further from the affordances and techne of things in themselves. A gap is perceived then between image and canvas, between surface and depth.

A short survey of the critical and philosophical implications of this dissonance will be undertaken with an emphasis on the discursive territories opened for artists and in particular the creative opportunities of directly using examples of 'machine voices': glitch, static, recordings or traces of magnetism as art making materials. It will be argued that such materials allow practitioners to collapse distances between image and object. Two recent artworks will be discussed which explore such possibilities in the context of screen-based art.

It will be further posited that technological development has depended on a subjectivity distributed between humans and non-humans and that to acknowledge this is crucial in evaluating not only our own relationships with and attitudes to media but also outside the sphere of human concerns in the great outdoors of metaphysics.

Keywords

aesthetics, materialism, data, media archaeology

Voces de máquina

Resumen

Hoy en día son más aparentes que nunca las tensiones existentes entre la reluciente pátina de las tecnologías de consumo, su diseño intuitivo y sencillas interfaces y las rígidas, inflexibles y rigurosas infraestructuras derivadas de la programación, la electrónica y la electricidad que las hace posibles. El interés de la industria actual por agruparse e integrarse en servicios como iCloud de Apple presenta a agentes dispares como un objeto único. Este proyecto ideológico aleja a los usuarios de las funcionalidades y la techne de los objetos en sí mismos. Existe un desfase entre la imagen y la tela, entre la superficie y la profundidad.

En este artículo se repasan brevemente las implicaciones críticas y filosóficas de esta discordancia, haciendo especial hincapié en los territorios discursivos que han introducido los artistas y, en especial, en las oportunidades creativas que supone utilizar ejemplos de «voces de máquina» –glitch (fallos técnicos), ruido estático, grabaciones o restos magnéticos– como material artístico. Se argumentará que estos materiales permiten acortar la distancia entre imagen y objeto. Se analizarán dos obras que exploran estas posibilidades en el contexto del arte basado en pantalla.

Finalmente se postula que el desarrollo tecnológico se ha basado siempre en una subjetividad repartida entre seres humanos y elementos no humanos y que reconocerlo es esencial para evaluar no sólo nuestra relación con los medios sino también para definir lo que queda fuera de la esfera de las preocupaciones humanas para adentrarse en el gran espacio abierto de la metafísica.

Palabras clave

estética, materialismo, datos, arqueología de los medios

Aesthetic(s)

In a now widely read series of blogs, tumblrs, a conference panel and website responses starting around spring 2011 a British designer, James Bridle, with others, documented, aggregated and discussed a phenomenon they named the “new aesthetic” which they claimed to constitute “a way of seeing that seems to reveal a blurring between “the real” and “the digital”, the physical and the virtual, the human and the machine” (Bridle, 2012).

At a glance, many of the images present on Bridle’s blog (Bridle, 2011-12) share the concerns of this article, showing disruptions of media surfaces which reveal tellingly, the algorithms or hardware which make them possible. Those surfaces include face recognition software falsely identifying faces in found objects, satellite imagery of planes leaving ghosting RGB traces and 111 pages of other examples.

Where we diverge though is in ways intrinsic to the tumblr format. Tumblr is designed as a quick compilation tool, fast and glib it applies a gloss to a never ending list of self-homogenising images. Lists are provocative in resembling an accumulation of evidence. Ian Bogost defends the listing tendency in much writing on Object Oriented Ontology as a kind of literary collocation which acts “Like a medieval

bestiary [...] a record of things juxtaposed to demonstrate their overlap and imply interaction...” (Bogost 2012 p. 38).

Bogost maintains that lists provide an injection of the real into the heart of philosophical debates. A deliberate bathos which flips an argument from the sublime to the banal. The difficulty with the new aesthetic is that its lists do not stand in contrast or support to a framework. Worse, they fashionably conflate ontologically distinct agents under the auspices of that catch all term “network” without giving time to consider what each object actually implies. “Aesthetic” given by my dictionary as, “a set of *principles* underlying and *guiding* the work of a particular artist or artistic movement” (New Oxford American Dictionary: entry for aesthetics, emphasis added) gives way to “aesthetics”:

a set of principles concerned with the nature and *appreciation of beauty* (New Oxford American Dictionary: entry for aesthetic, emphasis added).

If the criticism then is that taking a purely visual perspective on the presence of non-human actants plays into enemy hands by accepting only the surface values of technologies, what strategies remain to think and act in the most literal sense, incisively?

Alternatives: machine voices

Parikka (2010) asserts that to rethink media, we must also remake them:

I see media archaeology as a theoretically refined analysis of the historical layers of media in their singularity -- a conceptual and practical exercise in carving out the aesthetic, cultural, and political singularities of media. (Parikka, 2010).

Friedrich Kittler taught us a sharp lesson, media do not extend man, they shape him in ways which are bound up with competitive wars of the military and industrial. Where Foucault locates objects' originary aspect in human discourse, Kittler inverts this: Discourse and mediality are articulated through and with technologies which are paradigm-defining products of their own "discourse networks" (Kittler, 1990). This perspective foreshadows Wolfgang Ernst's media "archaeography" (Ernst, 2011) which posits what amounts to a parallel history of media authored by machines in the form of wax cylinders, zip disks, and burnt out incandescent bulbs, machine voices.

To be explicit, these "machine voices" are adopted as provocative primary sources in our account of media history to acknowledge their particular agencies which operate on sometimes the smallest scale of interaction but resonate vibrantly into the social, political and metaphysical. We do this in recognition that these resonances have been under-represented in main stream narratives of art, media and technology. Machine voices are their own but were made in a series of interchanges which involved variously, tools, humans, economics and a host of other heterogenous assemblages. With such antecedents in mind we should also include in our choir of voices the less immediately physical but non-the-less material presence of other agents of technology, algorithms, technical standards, instruction manuals and properties of electricity. Machine voices then may manifest in the domains of the audible, visible, tactile, olfactory, regulatory or algorithmic amongst others.

To validate the potential productiveness involved in an enquiry predicated on the agency of the non-human in the context of media history we might turn to *A Material History of Bits* (Blanchette, 2011) and *Objects of Our Affection* (Alt, 2011) two excellent accounts of the reciprocal relationships between human and computer systems in the history of programming. Blanchette (2011) records how the development from early assembly languages to high level and in particular, object oriented programming languages influenced the design of later processors. Designs were adopted which despite being less efficient than earlier ones better reflected the need for programmers to express their ideas flexibly. Casey Alt (2011) meanwhile discusses how object oriented programming (a way of organising and subdividing code into classes or objects) reflects a philosophical need to provide ontologies, descriptions of being.

Interestingly Alt also describes how such ideas were partly inspired by and partly a bi-product of the graphical user interface with its systems of icons and metaphors. (Alt, 2011 p. 282)

Experts

To approach a theory of such heterogenous entities requires expertise in new or at least unusual mixes of disciplines, which has educational implications.

If we had heeded the lessons of Kittler's interdisciplinary approach, we might have got students to read Homer and Pynchon (two of his favourite authors) as well as programming manuals. (Parikka, 2011).

To competently discuss the intersection of computer code, vintage electronics, military history, philosophy, aesthetics etc. is far beyond the scope of art, media or computing schools, at least in the UK and this needs to change. It is perhaps unsurprising that many of those producing interesting work in these areas (of the practical or written varieties) are disciplinary itinerants. Ian Bogost, Alex Galloway, Julian Oliver and Julius von Bismarck are a just few examples. Artists whose interests incline them to probe the technological are often hampered by a lack of skills, which not only prevent them taking apart technology but also to ask interesting questions of it.

Relations

Earlier a liaison between object oriented ontology and media archaeology was introduced and will now be expanded. The tension between the smooth abstracted experiences of consumer technology and its unattractive but agential core points also to a gap in our understanding of the way in which we interface, interact or relate to it and the way one object interacts with another. Graham Harman departs from Latour's depiction of actor networks in claiming that objects' relations occur internally to them rather than in an intermediary plasma. Paul Caplan has written eloquently about the interaction between a database such as the facebook back end and jpeg objecthood in this context:

It encounters a moment of encoding, a particular position of the standard. It does not encounter the complete complex reality of that standard in terms of its history, nature and other connections and, as we shall see, essence. It does not need to. It needs to encounter which is necessary to establish the database image and data point. (Caplan, 2011)

There is no need to create a third man, a ground which supports this relationship but raises ontological difficulties of its own. The

correlation happens within the object itself. This possibility is certainly attractive and as Caplan points out allows us to talk about “technological determinism without a sneer” (Caplan, 2011). Harman himself has this to say:

If things are relational, they lose their capacity for disruptive or transformative change. (Harman, 2012)

The essence of things recedes in the interaction and is never “exhausted” (Harman, 2012) and objects persist in their essence though their properties change or adapt. This unassailable but disruptive core is a motivating factor for seeking out the underprivileged thing in media history.

1280 *1024

1280*1024 is screen based artwork produced by the author. It was shown at Laboratorio Burrida, Genova, Italy in 2012. A web crawler searches internet addresses based in Italy and scrapes the contents. Alongside “normal” webpages, a whole host of other entities exist and are scraped: login pages, mail servers, forgotten corners of websites, forwarding addresses. Among the html are web programmers comments and placeholder texts, mostly unread by the public but nonetheless written into the very architecture of the web.

‘It works!...’ (fe2.wf1-hfr12b.wf.inet.it)

‘My First ASP Page’ (host208-162-static.138-193-b.business.telecomitalia.it)

The scraper is visualised as a video projection - each pixel on the screen represents a single web address transmitting the html contents by encoding them in light intensities.

1280*1024 disturbs screen space by reconceptualising the screen itself as 1310720 small screens, each with its own programming ontology. Every pixel has its own object in code, an instantiation of a pixel class with its own particular properties and capabilities. The piece intends to problematise the division between image and code by delineating the code with properties of the screen material itself (as in the number of pixel objects or the refresh rate of the screen) and vice versa by writing code which addresses pixels only individually and never in relation to one another. The screen is approached as an essentially spatial entity synthesising its own architecture, web spaces and the dynamic topologies of its own code in recognition that:

discussions of object oriented programming are so riddled with terms such as space, environment, interface, movement, topology, architecture, inside, outside and parallel that their ubiquity effectively

renders them invisible. In fact, it is nearly impossible to write about object orientation without employing such spatializing metaphors... (Alt, 2011 p. 288).

Individual characters in the visualisation are displayed one at a time with a direct, 1:1 mapping from their 0-255 ascii values (for example a lower case “a” has decimal value of 99) to a light level from 0-255 where zero is black and 255 is pure white. This mapping acknowledges again the mixture of human convenience and machine possibilities which are implicated in the history of computers. A byte in computing architectures is generally the basic addressable unit. Eight “bits” (the famous zeros and ones) in binary have 256 possible combinations. This size was decided upon largely because it allowed for the easy storage of most necessary characters (expanded from the earlier 7-bit system to incorporate some foreign accented characters etc.). Just as in the feedback effect of object orientation into processor design we see how “ideologically etched material practices often continue to discipline bodies and shape discourse far beyond the lifespans of their originating ideologies” (Alt, 2011 p. 298).

Refractive index

Refractive index is a visual art and research project by artist Jamie Allen shown at Future Everything 2012, Manchester and soon on the BBC big screens.

Investigations into the reflective and refractive power of public media displays. Imagery and software marks the physical effect that public media displays have on city spaces. An art-research project that uses large scale displays as a kind of active camera obscura; inverting the usual use of the screen and showing us what our screens “see” when they peer into the night sky. (Allen, 2011).

In a series of late night screenings, a computer programme causes the screen to flash or strobe white or to emit bursts of colour across the hue spectrum. The CCTV camera which is part of each screen’s infrastructure captures images throughout and finally algorithms examine the footage for “faults” where the hardware of either the screen or camera has proved unable to match the expectations of the software by failing to refresh fast enough, recognise colours etc.

Public screens are envisaged in terms of their capacity to broadcast content. Their history can be traced to the late 19th C adaptation of magic lanterns to project “advertisements and election results on public buildings” Huhtamo (2001). When their physicality is discussed, it is often in terms of their potential to focus an event in space or spaces, allowing people to gather and socialise. Increasingly they are also seen as a site to publically manifest social media or to interact with mobile devices (Ballagas *et al.*, 2005, Tuulos *et al.*, 2007).

What is curiously elided from the critical picture of the screens is their massive architectural and infrastructural presence. This is perhaps related again to their historical antecedents in the magic lantern and phantasmagoria whose “showmen did their best to keep their machinery secret” Huhtamo (2001). At 25 square metres and necessitating a nearby server and control room the screens have critical weight. Refractive index explores this physicality by leveraging the edges in performance of the system into productive properties. The screens begin to speak with their own machine voices.

Spectra

This short account has attempted to consider what a synthesis of some current threads of what can be called a “materialist” tendency in current critical thinking imply in the practice of art making. By doing so it is recognised that such practical projects equally embody investigative research in this area. It has been further suggested that there has been an unhelpful focus on the visual in recent discussions of technologies and culture.

The fashion for glitchy, tech-heavy imagery which bleeds from the world of media art into the broader blogosphere engenders the conception, perhaps begun in Debord (1967) that the spectacular remains the dominant political actor within and outside media. This perspective threatens to occlude the influence of the many individual material agencies which interact with and without humans to produce topologies underprivileged in many accounts of our techno-cultural landscape. This occlusion reflects a standpoint which sees all relations as human and embodies an ethno-centric philosophical paradigm to which a number of critical sources cited here are applying pressure. To bifurcate image and infrastructure is of course, reductive and any analysis must proceed while “recognizing the way abstraction works in technical media from voltages and components to the more symbolic levels [...] from the world of meanings and symbols but also a-signification to the level of dirty matter” (Parikka, 2012).

The task then is daunting. To attempt a repositioning of critical attention which is at once helpful to us in our encounters with technology but recognises the engagement of an infinity of players whose subjectivity is alien to us.

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CV

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